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Hand-to-Mouth Buying and Installment Selling

Bankers' Viewpoints on These Problems Were Feature of Convention of National Wholesale Dry Goods Association—O. H. Cheney Believes Hand-to-Mouth Buying Is Here to Stay—Constructive Suggestions to Turn It to Advantage—Geo. W. Norris Shows Limitations of Installment Plan

TWO of the most interesting developments in distribution of merchandise are the hand-to-mouth buying by distributors and the installment plan of selling to the ultimate consumer. These two elements may be of leading importance in shaping the future conditions under which textiles will be distributed. The banker is in a position to get a very broad view of these subjects and present a clear analysis. This is substantiated by the two papers published below, which were delivered by bankers before sessions of the National Wholesale Dry Goods Association's convention in New York last week. The subjects themselves are not new, but the light cast upon them by these authorities shows up new phases which should aid in clarifying the merchant's thought when he is confronted by these problems in his own business.

Hand-to-Mouth Buying*

By O. H. Cheney

Vice-President, American Exchange-Pacific National Bank

HAND-TO-MOUTH buying is not a sickness—it is only a symtom. It is not a temporary trouble—it may be the outward appearance of a fundamental change in the whole structure of our business life. In the dry goods industry it is affecting the retailer, the wholesaler and the manufacturer and producer at every stage. And it must, of necessity, affect the consumer. Hand-to-mouth buying in many industries is changing manufacturing methods, merchandising methods and banking methods.

I come in close contact with about every kind of business because the bank with which I am connected endeavors to render services intimately related to every phase of merchandising. I have therefore had to give a great deal of thought to hand-to-mouth buying and I have had to listen to every side of it.

One reason why we find it so hard to adapt ourselves to big economic changes like hand-to-mouth buying is a very human one. We dislike to think of abstract things like economic changes—we try to make everything concrete. We try to overcome our helplessness in handling intangible economic forces by blaming somebody for them. We must find somebody whose fault it is—and that somebody is always somebody else. The wholesaler is blaming the retailer for hand-to-mouth buying. The retailer is blaming the manufacturer, the wholesaler and the consumer.

Just what do we mean when we say "hand-to-mouth buying?" If we stop to think for a few minutes we discover that it may mean any or all of a number of different conditions. At different times and by different people it is used to mean:

1. Any irregular buying.
2. Buying in small quantities at a time.
3. Staying out of the market beyond the established buying season.
4. Waiting until the selling season begins and then ordering full stocks for immediate delivery.
5. Waiting until shelves are cleared before buying.
6. Waiting until near the season's end and then buying at cut prices.

We cannot begin to solve the problem until we distinguish between these different conditions. Hand-to-mouth buying is not one problem, but many—each has a different cause and each will require a different solution. In general we may distinguish three main types, which may be called "piecemeal buying," "slow buying" and "strategic buying." These are, of course, frequently combined.

Piecemeal buying by a retailer comes from his desire to keep stocks and investment low and to increase rate of turnover.

Slow buying comes from caution as to future conditions of buying or selling, fear of falling price levels, indecision as to style developments, lack of self-confidence, etc.

Strategic buying comes either from careful planning and carrying out of a sound merchandising program or else from a desire to take shrewd or sharp advantage of the producer or wholesaler or of consuming conditions.

Causes for Hand-to-Mouth Buying

The causes of hand-to-mouth buying may therefore be summarized as follows:

1. The retailer's fear of a buyers' strike and unsold stocks.
2. Constant education of the retailer by manufacturers, Government officials, accountants, experts, etc., on the idea of turnover and the profits to be made from increasing it. The retailer learned the lesson only too well—that is, part of it. He has forgotten that there are two parts to a ratio and that turnover can be increased either by increasing sales volume or by decreasing stocks. Being human he has chosen the easiest way, the latter.
3. The retailer's fear of falling wholesale or retail price levels.
4. Rapidly changing styles which put too much strain on the retailer's buying judgment.
5. Quicker deliveries because of greater railroad efficiency have encouraged late ordering.
6. The necessity for reducing the growing cost of doing business. The retailer has found that cutting the cost of financing by reducing inventory is one way of reducing costs.

Several Influences on Wane

Now, how many of these conditions might be considered justifiable reasons for hand-to-mouth buying at the present time? There is no doubt that several of them can no longer be considered as being any real influence in retarding buying. There is no present indication of a buyers' strike and as long as manufacturers and distributors do their utmost to keep costs low and prices at reasonable levels there will be no buyers' strike.

As to the retailer's fear of falling prices. This seems to be an unavoidable result of the hyper-sensitiveness of the dry goods business o conditions in raw material production. This is particularly extreme in the cotton goods field. The fabric manufacturer and the final manufacturer and the wholesaler must always keep an eye on the weather in Texas, another eye on the temperament of somebody in the Department of Agriculture and a third eye on the ticker in Wall Street. This does not leave many eyes for their own business.

You know how hard it is to walk fast and straight if you keep your eyes on you feet. Well, in the last few years, the dry goods business has been going along watching its feet.

During the coming year prices should be more stable as the general level of commodity prices has been fairly stable for a considerable period. The retailer has no reason to fear a collapse in price levels.

Method Is Persisting

Why then will retailers persist in hand-to-mouth buying? The answers are clear, and there is no use in the calling of names. For one thing the retailer feels that the manufacturer is making him dizzy with the rapid succession of styles. The retailer has learned that he has to keep stocks low or else he may be caught with outmoded goods. The retailer feels also that there is no reason why he should carry the financial burden of inventories if he can pass it along to the wholesaler.

What is to be done about it? There is no justification for trying to eradicate hand-to-mouth buying. In the first place, it is here to stay, in some form or another. In the second place, it has its advantages as well as its disadvantages. Before we decide what to do it would be desirable to decide what factors in hand-to-mouth buying are worth keeping and what factors should be eliminated.

Disadvantages

First let us consider the disadvantages. I shall enumerate the main ones briefly:

1. The retardation of buying is passed back along the line from retailer back to wholesaler to manufacturer and to mill.
2. Production costs are increased all along the line because the hope of efficiency and economy is in quantity production. So are the expenses of selling, packing, transportation and bookkeeping. Hasty production affects quality.
3. The wholesaler and manufac-

*Delivered before the National Wholesale Dry Goods Association convention in New York, Jan. 19, 1926.

turer have to bear an undue share of the financial burden hitherto borne by the retailer. They have to pay the banking cost of maintaining stocks.

4. The industry is made unstable because it cannot operate on schedule. Employment becomes unsteady.

5. The habit of "shopping" by retailers is encouraged. Their regular wholesalers and manufacturers cannot deliver at short notice and as a result established wholesalers and manufacturers cannot depend on their trade. This also presents opportunities for small concerns with no standing to enter the market in guerilla selling. This also results in higher prices for popular goods bought at the last moment.

6. The dealers tend to slacken their efforts as they do not get the inspiration which comes from stock pressure.

7. Many sales are lost because the low stocks of dealers do not give the customer enough choice.

8. Consumer prices are increased —and ultimately consumer resistance will be increased.

Advantages

Now, I should like to discuss the advantages of hand-to-mouth buying.

1. It has in it the possibility of overcoming one of the manufacturer's and wholesaler's main troubles —the high peaks and valleys in sales and in manufacturing. You may feel that the industry has adapted itself on a peak-and-valley basis. It has so established itself that we are inclined to forget the enormous price we pay in laying off workers and taking them on, in shutting down machinery and starting it again.

Gentlemen, if by a sensible form of hand-to-mouth buying, you can to some extent even up the peaks and valleys in the sales line, you will be able to even them up in the production curve. And I feel that the benefits to your industry will be enormous. The manufacturers will be able to keep factories going more steadily and will be able to reduce costs of raw materials, labor and overhead.

2. Hand-to-mouth buying strengthens the retailer. It increases turnover. He is not burdened with stocks and he does not have to make so many price sacrifices. And the prosperity of the industry depends upon the strength of the retailer.

3. It enables the retailer to follow rapid style changes and thus help his volume insofar as style changes increase volume.

4. It tends to decrease cancellations and returns.

5. It tends to help collections.

6. It has induced a spirit of study and caution in the wholesaler and the manufacturer which are of some economic value.

A False Solution

There are some wholesalers who feel that the solution of hand-to-mouth buying by retailers is hand-to-mouth buying by wholesalers. Such a solution robs the wholesaler of his vital place in the dry goods business. If the wholesaler simply passes the buck he is giving up the result of many years of effort to establish himself as a vital link lin the chain of distribution.

After all, the function of the wholesaler is twofold—the warehousing and the financing. The wholesaler buys ahead in large quantities and sells what the retailer needs when he needs it. He serves the manufacturer by relieving him of the difficulties of merchandising and he serves the retailer by keeping him stocked with the proper goods. Extreme hand-to-mouth buying by the wholesaler performs neither of these two services. Hand-to-mouth buying is and should be the wholesaler's problem more than that of anybody else.

Constructive Suggestions

Now no matter from what angle you approach the subject these days you come up against the style question. And this brings me to my first suggestion. Would it be possible to introduce styles in a more orderly fashion—fewer at a time but more frequently and allowing the styles as long a life as necessary? Could new styles be announced regularly according to a program or schedule prepared six months in advance—would that help meet the difficulty?

In order to make such a program effective my second suggestion is to sell these styles to the consumer through strong educational campaigns. Would it be possible, through well-planned and well-executed publicity, to guide the consumer's style sense in the best directions? Is it fair to leave all the burden of public education to the retailer?

My third suggestion goes back of these. How do styles originate and where? Do sales follow styles or do styles follow sales? Or does style popularity develop like a snow ball? Does the American woman buy what she likes or does she like what she is told to buy? Who knows the answer to these questions? I feel that style control needs a basis of scientific research into the psychology of style.

Style Laboratory

As a practical application of scientific methods I suggest fourthly the possibility of establishing style testing laboratories. Would it be possible, by showing style samples far in advance to typical groups of consumers, to get better ideas as to possible style acceptance? The machinery for such laboratories need not be very elaborate and the results may be very much worth while.

My fifth suggestion is a further application of the scientific idea. Would it be possible, through the cooperation of a selected group of representative retail outlets, to study the actual movement of stock with special regard to style. If actual sales reports on the different styles were made frequently and regularly to some central point where they could be studied and analyzed, would not the results be of some help in guiding buying and selling and eliminating some of the style hazard?

Helping the Retailer

Which brings up my sixth suggestion. Would it be possible to help the retailer to budget his buying—to balance his stocks better—to obtain better proportions between staples and various types of style goods—better proportions in price groups—so as to make his buying safer? Such buying budgets could be worked out for different localities and store sizes and could be applied by request to the dealer's individual needs.

As a seventh suggestion, could not a group of retailers and wholesalers and manufacturers work out helpful ideas and general principles and pass on to the retailers the benefit of their experience? The wholesaler and manufacturer can reduce hand-to-mouth buying by stimulating "pull" on the goods as well as by increasing the "push" by helping the retailer sell rather than by bullying him into buying. Wholesalers' salesmen would become merchandising experts rather than order producers. More attention would be paid to the person in front of the counter rather than to the one behind it.

Another suggestion I would like to submit is the possible development of a "flexible" order system as a remedy for some of the evils of deferred buying. Would it be possible to encourage retailers to place quantity orders ahead specifying goods in general and leaving the sizes and styles for further instructions? Such an order would enable the manufacturer to buy materials more safely and economically and enable him to pass savings on to the wholesaler and retailer.

Frequent Visits to Market

Would it be possible to avoid the losses due to small orders by bringing the retailer to market more often? Would not a campaign of education stimulate more frequent visits of the retailer so that he could get new ideas as well as new merchandise? And, when he could not come, could he be encouraged to order more adequately and more intelligently from the catalog?

As a final suggestion, would it be possible to cooperate more closely with each other—and to cooperate with the manufacturers and retailers? I feel sure that if a representative group of individuals from each of those branches of the dry goods business could sit down together—a real "shirtsleeves" committee perhaps under the chairmanship of some unbiased outsider—they could work out definite means for minimizing the disadvantages of hand-to-mouth buying.

Gentlemen, hand-to-mouth buying is the wholesaler's best opportunity to strengthen his position in business that he has had in decades.

Installment Selling*

By George W. Norris

Governor, Federal Reserve Bank of Philadelphia.

INSTALLMENT selling is no new thing. The buying of dwelling houses, with subsequent payments on building association shares or installment mortgages, is an old practice, which, as far as I know, has been universally accepted as economically sound. Pianos and other musical instruments have been largely sold on the installment plan for many years. So has farm machinery, furniture, and many other things. It has long been the practice of jewelers to sell expensive pieces of jewelry to wealthy customers, and accept payment in three or four quarterly or semi-annual installments.

It Has Its Defenders

The recent great extension of installment selling is strongly defended. It is said that it enables people of small or moderate means to acquire things that they very much need, and that is is desirable that they should have, and that it makes little economic difference whether they save first, and then use the savings to pay for the article, or whether they buy the article first, and then save to pay for it; that, indeed, the latter is the better plan. It is also urged that just as the necessity for paying building association dues or life insurance premiums induces savings that would not otherwise be made, so the necessity for meeting the installment payments on articles bought on the installment plan diverts into useful channels money that would otherwise be spent for candy, soft drinks, or entertainment. It is also urged that it makes possible a larger production of goods and a quicker distribution, and that the percentage of loss on sales of this kind does not exceed the percentage on ordinary credit accounts—that, in fact, this kind of selling is in reality a mere variation of the ordinary credit account, substituting a series of partial payments for a single lump sum payment, and not materially extending the total credit period.

The advocates of the plan can hardly avoid the admission that it is at variance with old-fashioned ideas of thrift. Benjamin Franklin and many other wise men since his day have preached the advantage of saving first, as against going into debt to acquire luxuries, the money for which has not yet been earned.

To enable us to reach an intelligent conclusion in the matter, let us first consider the size and scope of the problem. It appears from information collected by the Farmers Loan &

* Delivered before annual convention of National Wholesale Dry Goods Association in New York, Jan. 21, 1926.

Trust Co., which is preparing a survey of the subject, that 85% to 90% of all furniture, 80% of all phonographs, 75% of all automobiles and washing machines, 65% of all vacuum cleaners, 40% of all pianos, 25% of all jewelry, and 13% of all radio apparatus, is sold on the Installment Plan. In these eight classes of goods, it appears that out of total sales of nearly 5,000 million dollars in 1924, about 3,300 million dollars, or over 65%, was sold in this way. The practice is being adopted by more and more dealers, and applied to more and more lines, so that there is no doubt that this total of installment sales was much larger in 1925, and it is estimated that it reached, or possibly exceeded 5,000 millions.

Significance of This Credit

Before getting down to detailed or specific questions, let us see the economic significance of an addition of this amount and kind of credit to the total amount of credit outstanding. It is estimated that the indebtedness represented by federal, municipal, and corporate bonds, and farm and urban mortgages, amounts to 100 billion dollars; that ordinary bank loans in this country approximate 20 billions; and that the gross total of money loaned from one class of people to another is therefore something like 120 to 130 billion dollars.

In comparison with these figures, an addition of 5 billions looks small, but it should be remembered that the indebtedness represented by federal, municipal, and corporate bonds, and real estate mortgages, is supplied from what are known as "investment" funds, and that it is therefore only bank and individual loans, amounting to between 20 and 30 billion dollars, that represent ordinary floating or current credit. While the added 5 billion is therefore an addition of about 4% to the gross total of all these items, it is an addition of 20% or 25% to the burden of current credit. This is not negligible.

Moreover, this additional 5 billion is primarily indebtedness incurred by individuals of limited means, from whom such credit statements as would be demanded from business houses cannot be expected. Neither is it indebtedness which as a general rule can be liquidated from the sale of assets. Its only security is a mortgage upon future earnings. It is not borrowed at 4%, 5%, or 6%, but it is estimated that when it is handled through so-called "credit corporations" —of which something like 1400 have grown up in this country in recent years—the interest charge approximates 20%. This additional charge must be borne by someone. Either it comes out of dealers' profits—which we know it does not—or else it is borne by the consumer, in which case the interest burden must be added to the cost of distribution, and therefore to the consumer's price.

Encourages Extravagance

There can be little question that the easy terms upon which goods so sold may be purchased, encourage the purchase of unnecessary goods or of unnecessarily expensive goods. In our office we employ about 350 girls or women. I recently asked one of them how many of the girls bought their fur coats on the installment plan. After a moment's thought, she replied "At least nine out of ten." I recently heard a large manufacturer of clothing quoted as saying that he deprecated the practice, but that it did have the advantage of causing people to buy more expensive clothes—that formerly the man with $25 bought a $25 suit, but that now he bought a $40 or $50 suit, paying $10 down, and walking out with a better suit of clothes on his back, and $15 in his pocket.

Another aspect of it is this. If 5 billion dollars worth of goods were bought in 1925, to be paid for in 1926, that means that the production and distribution of goods in this country in that year was sufficient to provide for the normal purchases of the year, and also to provide for 5 billion dollars' worth of goods that under former conditions would probably not have been produced and marketed until 1926. In other words, 1925 has borrowed 5 billion dollars worth of business from 1926, and—assuming that it is already 30% paid for—is going to absorb probably 3½ billions, or 5%, of the national income of 1926 to pay for it. If this performance can be repeated in 1926, all will be well, but it manifestly makes the whole situation less sound.

In the stock market, the existence of a so-called "short interest" is regarded as a protection to the market, because the short sellers will buy stocks to complete their trades, at a time when there may be few other buyers. This installment selling is opposite of that practice. The manufacturers and merchants of the country, instead of knowing that there is either a shortage of goods, or nothing more than a current consumption of goods, know that people have bought in 1925 all that they could afford to pay for, and nearly 5 billions more. I say "nearly" because some allowance must be made for the normal annual increase in purchasing power.

Not Substitute for Charge Account

The suggestion that installment selling has taken the place to a large extent of the ordinary charge account would be important if true, but the limited statistics thus far available do not seem to bear out the claim. The only ones that I have been able to find on this subject are those compiled by the Federal Reserve Bank of Boston, covering the business of Boston department stores. These figures show that installment accounts outstanding in November last were 110% above those of the preceding year, but that there was little change in the amount of the regular charge accounts. These figures, which I admit are too small to base a conclusion upon, indicate that installment sales have not taken the place of either cash sales or charge accounts, but are in addition to both, thus bearing out the claim that they represent an advance purchase of goods that would not ordinarily have been bought until the following year.

It is also urged that experience has demonstrated that losses on sales of this kind are not appreciably, if at all, in excess of losses on ordinary charge accounts. This is probably true, but it is not of great significance, because this great increase in installment selling has occurred during years of general employment and high wages. What will happen if we should run into a period of general unemployment or wage reduction is still to be seen.

There is one argument used on the other side that I am equally unable to subscribe to. That is the argument that installment buying has reduced savings. The figures compiled by the Savings Bank Division of the American Banker's Association, which are the most complete and authoritative that I know of, show a regular curve in the total of savings and other time deposits in all banks for the last 25 years, with a slight flattening of the curve at the time when savings were being diverted to the purchase of Liberty Bonds, and in the bad year of 1921. The increase was 1947 millions in 1920, 412 in 1921, 2237 in 1922, 1279 in 1923, and 2260 (estimated) in 1924. It should be noted, however, that these are for years ending June 30, so that the last figure is for a period that ended seven months ago. It is evident that if installment buying has an effect on savings, that effect would be shown, not in the period of buying, but in the subsequent period of paying. It is within the last year that the great increase in such selling has taken place, and it therefore seems to me to be fair to say that installment selling has not yet had a bad reaction on the accumulation of savings, but that it remains to be seen whether it will have such an effect.

Effect on Retailers Credit

There is another point which both bankers and wholesalers should keep in mind. I understand that the literature and representations of the "finance corporations" are generally of a character to leave the impression upon the retailer that he has "'sold" to the corporation the notes of his customers. As a matter of fact, it is a "sale" in little more than name, because there is always a "guarantee" or "repurchase agreement" or some other form of contingent liability left upon him. It is extremely likely that small retailers, careless or inexpert in making up credit statements, will overlook this contingent and apparently remote liability, and that their statements may therefore fail to reflect their condition with absolute accuracy.

Reasonable Limitations

Now what specific principles can we evolve from this discussion? In the first place, I think it may be said that the practice is easily defensible when applied to houses and house furnishings, farm implements, automobiles, sewing machines, pianos, and other things which (a) add to the earning power of the purchaser, or to his permanent or semi-permanent assets; (b) are or may be necessary or very useful; and (c) involve a larger amount of money than the average person of small means is able to lay out at one time. I do not think it can be successfully defended as to luxuries—using that word in the sense of "things which please the senses and are costly, or difficult to obtain"—or things which either cost little when new, or have little or no resale value, and are practically consumed at or before the date of final payment. In the second place, the installment seller should satisfy himself that the buyer is buying something that he really needs, which is going to be useful to him—using the word "useful" in the widest sense —and which it is within his means to pay for, and that he is not already overloaded with other contracts of the same character. In the third place, the period of credit should be reduced to the smallest period in which it is reasonably possible for the buyer to pay.

Under the pressure of the American passion for "volume," it is difficult for a merchant to observe these principles. He generally feels that he must meet his competitor's terms. I understand that until recently 12 months was the limit in automobile selling. Then some concerns stretched it to 18 months, and others had to follow or lose all the business in certain districts. Now they are reported to be trying to re-establish the 12 months' limit.

Difference of Opinion

In general merchandising there appears to be a good deal of difference of opinion. One department store in Philadelphia says "We are conservative on installment selling. We do not approve the extension of it to new lines." Another "Sees little menace in it, but is not adding new lines at present." Another "Does not anticipate extension of lines. Goods that lose value quickly should not be so sold." Still another "Thinks that the policy is unsatisfactory and hazardous. A poor policy for the customer to spend his money before he earns and saves it. Still, the present competition is so keen that no large trader can afford not to grant a reasonable amount of sales on this plan." While another says "Anything in the store may be purchased on this plan, up to the limit of the credit opened." In one store such sales are connected with a household budget. It is held that not more than 10% of the customer's salary should be pledged for installment payments, credit is carefully watched, and purchasers are encouraged to budget their spending.

In its present extensive development it is practically a new thing. It is born of the seller's passion for volume and the buyer's passion for indulgence. It ought not to be ac-

claimed as a valuable discovery in merchandising, or denounced as an unmixed evil. It is a thing to be analyzed, watched, and studied. It should be remembered that its final test may not come for some years. My feeling is that in the meantime it had better be regarded as a novelty, having undeniable elements of danger, and therefore to be indulged in sparingly and cautiously.

Indian Trade Small

English Cloth Exports to India Indicate a Year of Disappointment

MANCHESTER, ENG., JAN. 13—The annual report of the India Section of the Manchester Chamber of Commerce issued to-day states that during the year 1925 India has enjoyed a sound economic position, and the political horizon has been distinctly clearer. In spite of this the exports of Lancashire piece goods are to say the least of it, unsatisfactory.

"In the first three months of the year," says the report, "the shipments of piece goods exceeded those of the previous year, but there was a severe falling off from that time onwards until the end of the year when slightly better conditions were experienced, though too late to affect the current export figures. The export of yarns have likewise suffered a severe decline so that the year's trade as a whole is below that of 1924. On the other hand it is gratifying to note the satisfactory character of the figures for India's balance of trade. This contrast between sound general conditions and poor trade in cotton goods is not to be wholly explained by any interference of purchasing from Lancashire to other suppliers.

"It is true that Japanese shipments disclose a considerable increase. It by no means counterbalances the decline in British exports and the Indian mills themselves have had a bad year. The suggestion that piece goods have been too dear in relation to other commodities does not explain the modest turnover of 1925. The credit of the piece goods dealers has not had the chance of recuperating after the serious curtailment during the slump. However cautious they have been in their purchases they have as a rule been unlucky."

The report comments upon the welcome steadiness of the rupee and the healthy situation in regard to India's chief products, for which she has been securing excellent prices. "There is no reason to anticipate any serious setback in these good features of the general situation in India. On the whole the Committee considers that there is some justification for reasonable optimism."

PHILADELPHIA, PA. In a report filed in the U. S. District Court, E. Boyd Weitzel, receiver in equity of the Keystone Knitting Co., of Philadelphia, 134 N. 13th St., manufacturers of jersey cloth, etc., recommends this concern be liquidated as quickly as possible, and a distribution made to creditors rather than attempt to carry on the business.

Service of Wholesaler to Industry

Jobber Who Produces Only Time and Place Utilities Does Only Part of What He Must Do To Hold His Place

*By Louis Bader**

SOME time ago the cry was started "let's eliminate the middleman" and then followed much headache among those of our brethren who thought none too wisely in their desire to consummate this object. The middleman performs an economic function in the process of marketing. Marketing is an essential part of the process of production, since goods which are not marketed are only partly produced, consequently the middleman cannot be eliminated until a better substitute is found to replace him.

Real Utilities

The time and place utilities furnished by the middleman are just as real as the form utilities furnished by the manufacturer, and the elementary utilities furnished by the farmer. These necessary services of the middleman which requires the buying of labor, the renting of capital, and the taking of risk must be paid for or they will not be rendered. It will make no difference who furnishes these time and place utilities, whether it be the wholesaler or the manufacturer, the cost of rendering them must be accounted for.

The wholesaler or jobber (these terms are used interchangeably) of textiles has had an honorable career for more than one hundred years in this country. In the early days because of the economic conditions then existing he sold to the retailer practically all of the textiles we then produced. This continued to be the case for many years, but about fifty years ago changes commenced to appear in marketing and manufacturing and his influence as the principal distributor of textiles to the retailer started to wane and has gradually lessened, until today he is fighting hard to keep his place in the sun. This was forcefully emphasized throughout the whole of the convention of the National Wholesale Dry Goods Association held in New York during part of last week. Many speeches were made to the representatives of the jobbing houses, and the burden of all these talks was that the jobber fills a legitimate need in the marketing process, he ought to keep on and the justification advanced for his existence was the old saw that they furnished the time and place utilities.

This, of course, was once the best doctrine and still is sound, but does it go far enough? Many changes have been taking place and ideas are many more in number and more widely diffused than a hundred years ago, giving rise to questioning by many as to the desirability of the continued existence of the jobber to furnish only time and place utilities.

Important Changes

When the jobber handled 100% of the textile business we were a rural country. Our population was scattered in very small groups over wide areas and these groups were served by small retail stores. The housewife purchased textiles by the yard for every conceivable need. She took her purchases home and made all the clothing, household linens, draperies, stockings and everything else needed by the family. Today we no longer even approximate to this. The housewife buys very few textiles by the yard. Instead she buys the clothing, household linens, stockings and other textile products already manufactured for wearing, and, thanks to the rapid means of communication, style is just as much a fetish on the farm as in the city. With the help of the automobile, so far as shopping goes, we are now very much of an urban people. The enormous growth in our population resulting in large centers of people not too far apart has enabled the farmer with the help of the automobile to shop in department stores in large centers.

In keeping with this fundamental change in our mode of living the channels of distribution are changing so that in time the most economical and expeditious methods of getting goods from producers to consumers will finally be evolved to meet the changed conditions due to our growth and the spreading of ideas.

Middleman's Competitors

The changes so far made have been in the type of retail outlets for reaching the consumer with the resultant backfire of eliminating some of the middlemen. We have today the following types of retail outlets: unit stores, general stores, department stores, specialty shops, chain stores, and mail order houses—some of these latter doing business not only by mail but by means of department store divisions as well, and many of the larger department stores carry on a not inconsiderable mail order business.

In the early days there were only the unit and general stores. These stores had to depend altogether on the wholesaler and so the wholesaler or jobber did practically 100% of the business. Today the department stores, specialty shops (many of these are the creations of manufacturers), chain stores, and mail order houses buy directly from the manufacturer and depend only incidentally on the wholesaler. It is perhaps not an exaggeration to say that this group of retail outlets handle between them at least 50% of the retail business, and most students of marketing will agree that they have been a beneficial force in distribution and have not yet reached the limit of their growth. Add to this the further fact that nearly all textiles manufactured into clothing are sold by the manufacturer direct to the retailer and we can conclude that possibly more than 75% of all the textiles made are no longer sold through the mediation of the wholesaler.

Direct Selling to Retailer

The tendency on the part of all manufacturers to sell direct to the retailer or consumer has been helped along by national advertising. Spending large sums to educate the consumer to use his product the manufacturer becomes anxious to have as close a control over the sale of his product to the consumer as possible, and as a result he shortens the steps involved as much as he can. The textile industry is beginning to awaken to the need for the use of advertising and it is reasonable to suppose that here too, especially in the case of the larger commission houses selling a wide variety of fabrics, this same tendency may soon manifest itself.

It is evident from the obvious development which is taking place that the wholesaler who relies altogether on his value as furnishing time and place utilities is going to find it more and more difficult to do the volume of business necessary to justify his continued existence and to earn the profit he is entitled to. These time and place utilities have largely been of benefit to the retailer. The wholesaler could and should have filled a larger place in the scheme of distribution, and in this larger place he would have continued to hold his own as the channel through which most of the textiles and related products are distributed to the retailer.

The wholesaler is now confronted with the problem, shall he continue only the economic activities of furnishing time and place utilities to the retailer, or should be broaden out and add the service he is in a position to give to both the manufacturer and the retailer? A certain number of retail units to which he must serve time and place utilities will always be with us, and in so far as the wholesaler is also successful in speculating as to future requirements he will secure some business from the other types of retail outlet. The business the wholesaler will secure from all these sources will, however, continue to grow smaller and smaller until the irreducible minimum is reached.

Necessary Services

On the other hand if the wholesaler is to maintain and strengthen his position in the field of commerce it would seem that he must perform at least the following two services:

1. Give the manufacturer a more intensive marketing service.

2. Educate the retailer to sell more efficiently.

It might be said that the wholesaler has been giving a marketing service

(*Continued on page* 103)

*Author of "World Developments in the Cotton Industry."

Editors
Charles H. Clark Vernon E. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
in the Conservation and Protection
of Domestic Industries

Textile Exports for 1925

DETAILS on exports of cotton goods for 1925 have just been issued by the Department of Commerce. While they do not show extraordinary increases, yet the gain over 1924 is substantial, both in quantity and in value of product. There are few markets that give evidence of radical increase in their buying of American cotton goods and there is no telling whether the markets to which larger amounts have gone are to continue as increasingly large buyers of American products. In the case of China, which shows the greatest percentage of increase of any foreign country, it may be a debatable point whether the improvement has come to stay or whether the increased amount taken by this country was simply due to the belief that the boycott of English and Japanese goods would make saleable an increased amount of American manufactures. South America is ahead of 1924 in its exports of American cotton goods and so are Cuba and the Philippines.

The totals for the year 1925 make rather interesting reading, not so much because of comparisons with previous years as because of possibilities of the future. The total quantity of cotton cloth sent abroad for 1925, including cotton duck, was 554,983,894 square yards. This compares with 486,940,303 square yards in 1924 or an increase of 88,043,591 square yards for the year. As far as aggregate values are concerned, the total amounted to $90,084,024 compared with $82,378,410 for 1925, or an increase of $7,705,614 for the 12 months.

Neither in yardage nor in value does this represent the increase that might have been expected in view of better conditions abroad. On the other hand, it would seem to indicate that the improvement has not been as great as was generally believed, though the lack of increase may also be due in part to American distributors themselves. If we are to gain consistently in our export trade there must be more universal attention paid to its development. American cotton manufactures are sold in an increasing number of countries, particularly in South America, through resident agents. These agents may or may not have the interest of the domestic selling house at heart. More intimate contact with export countries would seem to be desirable if we are to develop in competition with manufacturers abroad.

Improvement in export trade on yarns is also noted, but here as well as in cotton fabrics, the increase for the year has not been marked. In carded yarns the advance of 1925 over 1924 has been slightly over 2½ million pounds. In combed yarns the gain has been only half a million pounds. The bulk of the yarn business has been to South America and on knitting yarns. If the development of native mills —a growth that is apparent not only in South America but in many other countries— is to continue, the possibilities of increased business in cotton yarns appear bright, but this development of native manufacturing militates against the likelihood of extensive enlargement of demand for fabrics. As long as Europe and other countries continue in a subnormal state, just so long will it be possible to provide for the decreased requirements of the native population by mills in these countries which turn out fabrics adapted to the restricted requirements of these buyers. Too frequently the reason for failure to increase the yardage of goods sent to specific countries is the unwillingness of domestic manufacturers to cater to the demand for low end merchandise. This is not true of the domestic market and it is hard to understand why American producers should not be equally willing to make something which the foreign consumer can buy.

* * *

"More Cotton on Less Land"

THE winner of this year's "More Cotton on Less Land" contest, sponsored by the *Dallas* (Tex.) *Morning News*, landed the first prize of $1,000 by raising 16 bales of 1 1/16-in. strict middling cotton on five acres of unirrigated land, and also won the district first prizes of $500 each offered by the Dallas Cotton Exchange and the Texas Cotton Exchange. The cotton was sold at 23c a pound and this, plus the prizes, netted the grower $4,484. In addition the prize winner, G. Mont Adams, whose farm is located in Smith County near Tyler, raised nine additional bales of cotton on 13 acres of land, had 15 acres that produced 45 bushels of corn per acre and also raised hogs, cattle and poultry.

Also participating in this contest were 4,400 Texas farmers in 168 counties, five of the contestants producing three bales an acre and 37 beating the record of last season's prize winner of a little more than two bales an acre. Particularly significant was the fact that not a prize was won by a grower of half-and-half cotton, thus demonstrating that it is not necessary to plant short staple cotton to make high yields.

When it is remembered that the average yield of lint cotton per acre in recent seasons has not been in excess of one-third of a bale the importance and possibilities of an educational movement of this character may be better understood. It is to scientific farming, including careful seed and soil selection, intensive cultivation and weevil control, that the South must turn in order to meet successfully increasing foreign competition and world demand. It must be accompanied by crop diversification and by efficient marketing methods. It is idle to expect more than a small percentage of the million or more so-called cotton growers of the South to respond to such an educational movement, but it is reasonable to expect that a majority of the large planters will do so and also a reasonable percentage of the more intelligent tenant farmers.

The Texans who are sponsoring this movement are careful to explain that "More Cotton on Less Land" does not mean that more cotton in the aggregate will be raised in the South, but that more cotton will be raised per man, per mule and per acre. It may be granted that this is so, and also that ultimately "More Cotton on Less Land" will give southern planters better control of acreage and production. Its significance for both domestic growers and spinners, however, lies in the fact that it opens the way to better cotton, cheaper cotton, a better adjustment of supply to demand, and independence of increasing foreign competition.

* * *

Yarn Commissions Fugitive

MUCH has been said about the futility of selling yarn on a split commission basis, but it is surprising to hear reports of how few transactions today are figured on full five percent for the seller. In nearly every instance the dealer is compelled to reckon on competition that means the elimination of at least part of his commission, if not all of it. The story is told in the local yarn market of a transaction which illustrates, better than abstract statements can, the length to which dealers will go in order to effect a sale. The transaction in question was on 40s-2 skeins and the sale was to a western rug mill. One house in the district made an offer of 53c. for the lot, which was the figure obtained from a specific spinner who would not budge in his attitude on price. After the offer was made a salesman for the house saw in the office of the buyer confirmation of the sale of the same mill's spinning at 51½c. Of course, the original dealer lost the business. The spinner in the transaction happened to come to New York a few days after the incident and he was asked how it was that he would sell yarn at 51½c. on which he had quoted 53c. When the details of the sale were mentioned this spinner admitted he had sold the yarn in question but pledged his word of honor that the transaction had been closed at 53c. and that he had not sold below this figure.

The house that was responsible for the sale is a large one, with a decided overhead in the matter of salesmen and other expenses and it is a matter of wonderment how it could be figured that a sale on such close margin would be countenanced, especially in view of the necessity of paying western freight. It used to be thought by the yarn dealer that it was good policy to make concessions on certain transactions to certain buyers with the hope that they would remember the favor done them and that future business would result. Sometimes this happened. It is admitted today that such a thing is not possible. In other words the buyer knows that he does not have to pay spinners' prices but that the dealer will voluntarily throw away part or all of his com-

mission in order to meet what he feels to be the strong competition of others in the market.

This method of doing business resulted last year in a very lean period for the majority of yarn houses. There are a good many who are reaching the point, if they have not already attained it, where they are determined that for 1926 they will refuse to sell in competition of this kind, preferring to cut their business in half if necessary rather than operate on what is often less than a brokerage. If this decision is adhered to, it may be expected that the red ink coulmn of the yarn houses ledgers may not be as noticeable as during 1925. If, on the other hand, competition continues to be as keen as it has been for many months, no better result can be expected than the unfavorable outcome of last year.

Crop Report Plans for Coming Year

WASHINGTON, D. C.—The Crop Reporting Board's first report on acreage, condition, and probable production of cotton, will be issued on July 2. The June 2 condition report will be eliminated. This year's survey is expected to cover 10% of the cotton area as against 3% heretofore. The Board plans to distribute 1,000,000 card questionnaires among farmers in connection with the June survey, which is expected to yield a large number of reports upon which to base its acreage estimate. The survey will be supplemented by data obtained with mechanical crop meters, which were used widely for the first time in 1925.

The survey of acreage in June has been arranged with a view to eliminating acreage revisions later in the year, except in case of abandonment. Heretofore, this survey has been made through the rural mail carriers in October, being used in December acreage revisions. The report on revised acreage and yield of cotton in 1925 will be issued May 15 instead of June 2.

No changes in the issuance of the semi-monthly cotton crop reports are indicated in the Board's schedule of release dates.

"The dates for cotton are subject to any changes which may be made by Congress in the basic law which fixes the dates of these reports," the Board said.

A report giving a preliminary estimate of wool production in 1926 has been added to the schedule, for release July 29.

Endeavor to Check Gambling in Cotton Futures

WASHINGTON, D. C.—Representative C. B. Hudspeth, of Texas, introduced a bill in the House last week designed to prevent gambling in cotton futures and to make unlawful the sale of any contract for future delivery of any cotton within the United States, unless the seller is actually the legitimate owner of the cotton at the time. The bill was referred to the Judiciary Committee.

PLEASANTVILLE, N. J. Star Knitting Mills, Inc., 4700 Frankford Ave., Philadelphia silk hosiery manufacturers, will erect a new manufacturing building here on which estimates will be received Feb. 2. Andrew J. Sauer & Co., are the architects in charge. The building will be 200 x 90 ft., and one-story high, present plans taking into consideration the possible erection of additional floors, at a later date. The same goods as are manufactured at the Phila. plant will be made at their new mill although they have under consideration the addition of several new lines of goods when the new plant is completed.

Wool Trade's Annual Dinner

President Wright of Boston Trade Optimistic on Outlook—Wool Movies Entertain

THE 14th annual dinner of the Boston Wool Trade Association was held at the Copley Plaza Hotel, Tuesday evening Jan. 26, some 600 members and guests being present and presided over by Walter P. Wright president of the Boston Wool Trade Association. The gathering was a huge success although rather smaller than on some other occasions, each member being restricted to two guests. Several innovations were noticeable. President Walter P. Wright set a precedent by presenting to each person an imported pigskin billfold which turned out to be later quite symbolic of the very optimistic address made by him following the coffee. The movies also came to the wool trade. A very snappy and witty scenario had been prepared by Mayall Bruner under the general "misdirection" of Lester Bottomley who furnished the art titles in which these enterprising young members of the wool trade had managed to rope in for the first time such grave and reverend seigniors of the wool trade as E. Frank Lewis, F. Nathaniel Perkins, William E. Jones and other well known figures on Summer Street.

Seated at the head table were several well known leaders in civic, political and manufacturing circles; Lt. Governor Frank T. Allen, Hon. Wilfred W. Lufkin, collector of the Port of Boston, Franklin W. Hobbs of the Arlington Mills, Claude H. Ketchum vice-president of the association, S. Nathaniel Perkins, treasurer of the association, J. J. Nevins treasurer of the American Association of Woolen and Worsted Manufacturers, John B. McPherson statistician for the National Association of Wool Manufacturers, former president John Wilcox, Arthur Wheelock of the Stanley Woolen Co., Arthur E. Gill, Thomas P. Curtis of Deering, Milliken & Co., and William H. Hill.

President Wright's Address

President Wright's address was a very concise and comprehensive survey of the conditions in the wool trade during the last twelve months, strongly colored by optimism based upon the facts he presented as following one of the most disastrous years in the memory of the wool trade. The magnitude of the wool trade was referred to incidentally in the statement that 80% of the duties collected at the port of Boston during the last fiscal year had been on wool imports. The trade was congratulated by the speaker on its ability to handle its affairs during such a crisis. Everything was now in a sound financial condition, with every probability of making the year 1926 a period of recouping the losses of the past. The address which was listened to with close attention was in part as follows: "A year ago, at the time of our annual dinner, the outlook was about as discouraging as could be imagined. Wool was declining in price every day and we all, manufacturers and dealers, had enough of it. I remember our president at the dinner, in trying to look at the encouraging side of the situation, reminded us that 'every cloud has a silver lining,' but we were a long while seeing the lining.

"But now the picture has changed, and with the foreign markets of the world from 35 to 40% lower than they were a year ago, with practically all the other major staple industries of the country enjoying prosperity to a marked degree, with no surplus of goods made up in the mills, in the New York commission houses or in the hands of the cutters up, with labor well employed at good wages, with easy money, with the worsted machinery running again and not over a normal supply of wool in this country, with the manufacturers owning many million pounds less than they owned a year ago, the outlook for 1926 is certainly encouraging."

"While we have all lost during the past year a part of our capital, we still have our courage with us to go ahead and bring wool from the farthest corners of the globe to supply the needs of this great, prosperous country, the richest in the world.

"With this great stream of foreign wool pouring through our market, in addition to the bulk of the domestic clip, handled by the same able wool merchants who staged that most remarkable come-back of any trade of the country after 1920, I cannot help feeling that after the recent period of conservative 'hand-to-mouth' buying in the past of the manufacturers, that if we can keep wool on its present safe basis, we can look forward to the coming year with every assurance of a normal, prosperous year."

The entertainment which followed was on the whole the most interesting and effective of any similar gathering of the association. Lester Bottomley was the announcer of the events and his good humor was positively infectious.

The wool trade movies constituted the chief hit of the evening. "Pilgrim's Progress" showed the commonplace adventures of an imaginary millionaire wool man "from dawn until unconscious." The picture had not been produced without the aid of several fascinating flappers who had been imported into the wool section for the purpose. The younger men of the trade were rather conspicuous by their absence from this picture, to the amazement of all present. "Misdirector" Bottomley seemed a trifle nervous as to how the picture would take with his audience, but the long continued applause showed that this effort of the House and Entertainment committee was fully approved. In the "cast of infamous characters" the golf experts, Jesse Guilford and Francis Ouimet figured as caddies and more incongruous still was the head of the house of Hallowell, Jones & Donald as a sample boy with the noted and venerable wool scourer E. Frank Lewis as head salesman for the firm of Longlock & Skultsh, wool dealers, the president of which Dan MacDonald of Barrett & Leversonn carried out his part in true movie style. The seething wool section of Summer Street was shown deserted although a little later a four horse dray rolled along carrying a single bag of wool.

TEXTILE CALENDAR

Southern Textile Association, Spinners' Section, Sectional Meeting, N. C. State College, Raleigh, N. C., Feb. 5, 1926.

National Retail Dry Goods Association, Annual Convention, Hotel Pennsylvania, New York City, Feb. 8–12, 1926.

International Fabric Exposition, Grand Central Palace, New York City, Feb. 22–March 6, 1926.

Knitting Arts Exhibition and Annual Convention of National Association of Hosiery & Underwear Manufacturers, Philadelphia, March 22–26, 1926.

International Textile Exposition, Textile Exhibitors' Association, Mechanics Hall, Boston, April 12–17, 1926.

National Association of Cotton Manufacturers, Spring Meeting, Boston, Mass., April 13–14, 1926.

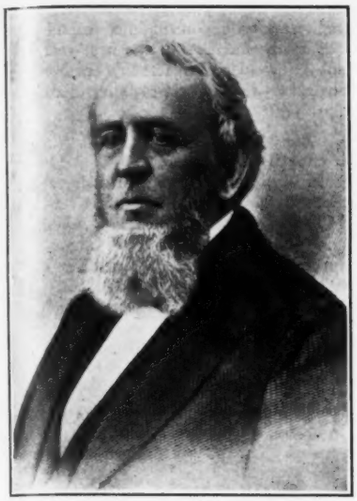
Second Chemical Equipment Exposition, under auspices of Association of Chemical Equipment Manufacturers, Cleveland Public Hall, Cleveland, O., May 10–15, 1926.

American Cotton Manufacturers' Association, Annual Convention, Atlanta, Ga., May 18–19, 1926.

American Society for Testing Materials, Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 21–25, 1926.

Second Southern Exposition, Grand Central Palace, New York City, Sept. 26–Oct. 6, 1926.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Nov. 1–6, 1926.



John C. Whitin, Founder of Whitin Machine Works and President from 1830 to 1882. (Reproduced from Whitin Booklet)

Imports of Cotton for 1925

WASHINGTON, D. C.—United States imports of specified kinds of cotton cloths through the customs districts of New York, Boston, Philadelphia, Chicago, and San Francisco last year totaled 95,000,000 square yards valued at $22,000,000, according to the Department of Commerce. This was a considerable decrease from the 123,900,000 square yards worth $25,500,000 imported during the last 10 months of 1924, the period for which figures are available. The high mark in these imports was reached in December, 1924, and the low point in August, 1925 since which time there has been a fairly steady increase, although the figures for December, 1925, were considerably less than half those for December, 1924. Unbleached poplins, broadcloths, madras, oxfords, and other shirtings constituted 56% of the total volume of these imports during the 10 months period of 1924, and 57% of 1925 imports.

Consider World Cotton Stocks and Consumption Estimate

WASHINGTON, D. C.—The Commerce Department has not reached any conclusion yet with respect to the feasibility of estimating world cotton stocks and consumption, according to Secretary of Commerce Hoover. The Department studied the proposal several years ago, but abandoned it at that time because of the lack of adequate facilities and personnel for embarking on such an ambitious scheme. It was brought up again by Rep. Aswell, of Louisigress in December proposing that anna, who introduced a bill in Con- the cotton crop reports should be supplemented by information on world requirements.

PITTSFIELD, MASS. Dennis T. Noonan, president of the Berkshire Woolen Co., estimates that about 80% of the woolen workers in this city are at present employed. He predicts improved conditions throughout the year.

How Textile Machines Are Made

Valuable Book Published by Whitin Machine Works Tells Story of Manufacture and of Company's Growth

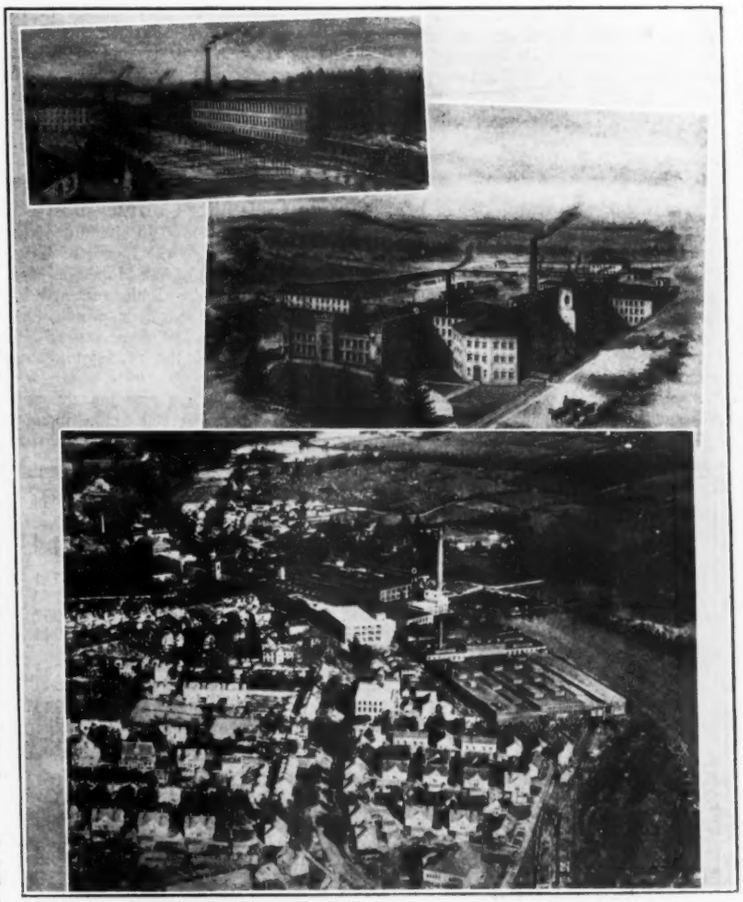
THE average textile manufacturer is naturally interested in the story of how the machine equipment which he uses is manufactured. Consequently he will find much of value in a book entitled "A Trip Through the Whitin Machine Works at Whitinsville, Mass," which has just been published by that company, because it contains a section giving in concise and illuminating style an account of the manufacture of a textile machine from the first plans of the designer to the ultimate finishing of the equipment. This section is illustrated by a large number of photographs showing in consecutive order the various processes involved in this evolution.

In addition the book possesses a great deal of the human interest element as it details in brief the growth of the Whitin Machine Works from its humble beginnings in 1831, when John C. Whitin made and patented his improved picker, to the present day, when the company employs 4,000 people in the manufacture and sale of textile machinery. The plant today contains over 40 acres of floor space; has a foundry capacity of 150 tons per day; uses 4,500 tons of steel and 4,000,000 ft. of lumber per year; and consumes 20,000 tons of coal annually in its power house. This section of the book also contains photographs of the past and present officials of the company and of its northern and southern sales forces.

Description of Village

Another intensely interesting section of the book is that devoted to a description of the village of Whitinsville, which is known as one of the most attractive manufacturing communities of New England. Although part of the village is privately owned, a part has been constructed by the works and includes among other points of interest a large memorial gymnasium erected by the Whitin family in memory of George Marston Whitin. The many photographs which illustrate this section of the book give a clear idea of the beauty of the community.

Its 55 pages of graphic description of the Whitin Machine Works, and of the manufacture of textile machinery there, make this book one of those contributions to textile literature which is far more than a piece of advertising copy but is rather an educational volume of considerable importance.



Growth of the Whitin Machine Works: 1, Works in 1848; 2, Works in 1880; 3, Works in 1925. (Reproduced from Whitin Booklet)

Photo by Bachrach

E. Kent Swift, Treasurer and General Manager of Whitin Machine Works. (Reproduced from Whitin Booklet)

Prepare for Leipzig Fair

Will Have Special Rayon Exhibition—Textile Machinery Featured

More than 75 acres of floor space will actually be occupied by exhibits at the Leipzig Trade Fair, according to E. A. Boettcher, American business representative, whose office is at 630 Fifth Avenue. These acres of space include not only the buildings in the city proper, where the greater part of the fair activities will take place, but also the buildings in the technical, or machinery section which has its own grounds a short automobile ride out of town. The fair opens on Feb. 28. The major portion closes on March 6, but the technical section continues till March 10.

One of the features this spring will be the special rayon exhibition, occupying 15,000 square feet, which will be put on by the Association of German Rayon Manufacturers. Another will be the special exhibition of textile machinery, occupying 5,000 square feet. Though the fair reached tremendous proportions last year, an even greater fair is promised this spring.

Every country on the globe was represented at the fair of last spring, as is shown by the official report made to the United States Department of Commerce by Assistant Commercial Attache Douglas Miller. He gave the number of registered buyers as 180,000. Of these 17,200 were from countries outside of Germany. He placed the number of exhibitors at 13,970 and of these 692 were from non-German lands.

Mr. Miller gave the number of exhibitors at other European fairs as follows: Milan, Italy, 4,000 to 5,000; Lyons, France, 3,000; Utrecht, Holland, 7,000 to 8,000; Frankfort-on-Main, Germany, 3,000; Cologne, Germany, 2,000. These figures show that the Leipzig trade fairs are the largest and therefore the most interesting ones for the American business man.

His analysis shows that Great

(*Continued on page* 91)

Plan Uniform Sales Contract

Wool Goods Men Favor Abolition of "Copy of Order"

The special meeting of selling agents held Thursday of last week at the headquarters of the American Association of Woolen & Worsted Manufacturers, in New York, adopted resolutions to the effect that:

1. The term "copy of order" should be abandoned and replaced by the word "contract."

2. If the clauses now in use on an unsigned contract can be enforced through a partial delivery, then additional clauses relating to arbitration will be equally enforcible. This opinion is indorsed by a prominent firm of attorneys; no legal precedent as yet exists, however, to support the opinion.

3. The adoption and employment of a uniform sales contract form would establish common usage which is recognized in law.

The meeting was unanimous in the opinion that a uniform contract form was essential to the welfare of the industry, making both buyer and seller bound to the agreement he signs, and that partial delivery should constitute "performance" rather than exposing the shipper to the consignee's claim of breach of contract. It was felt that "putting teeth" into such contract will serve to eliminate some of the evils existing for some time in regard to unwarranted cancellations and returns. It was, however admitted that the buyer must be dealt with fairly and equitably.

"We should be able to carry violations to an issue," declared W. S. S. Graham, of the Kent Mfg. Co., and in this all concurred. F. K. Nixon, selling agent for the United States Worsted Corp., urged that the executive committee approve the resolutions at once, that the trade as a whole may adopt the uniform contract form at an early date. It was doubted whether this could be done before the opening of the fall selling season, which was only about one week distant, but it was hoped to have the contract in force before the spring opening in July.

Field Secretary Herbert E. Peabody announced the results of a questionnaire to the trade on the question whether the association membership should be divided into groups as to classes and grades of merchandise handled. Of twenty-six received, twenty-one favored such subdivision. Nine favored a division between woolen and worsted mill agents, four, fine, medium and lower grades, and seven men's wear and women's wear goods sellers.

Joseph D. Holmes, reviewed some of his experiences of many years, emphasizing that of extreme importance was the necessity of the trade to instill confidence among themselves and in their customers. He said that "the buyer and the sponger is generally a decent sort of a fellow, and should be dealt with fairly in order to get that confidence."

Textile School Notes

TEXTILE WORLD will from time to time publish under this heading items of current interest associated with various textile schools throughout the country.

Phila. Textile School

Fraternity Tenders Dinner to Professors

Monday, Jan. 11, the Phi Psi Fraternity, whose original chapter is located at the Philadelphia Textile School, tendered the professors of the school a dinner. The repast and entertainment were thoroughly enjoyed. Those in attendance were Professors Elmer C. Bertolet, P. Theel, George Byler, Howard Walters and Joseph Goodavage of the chemistry and dyeing departments; Professors W. Jennings and Jonathan Lockwood of the woolen and worsted department; Professors W. Pfeiffer, W. McLain and Wesley France of the weaving department; Professors Richard Cox and E. Kaiser of the jacquard department; Professors John Naab and Paul Youse of the cotton department and Professor Frank Giese of the fabric analysis department.

* * *

School Year Book Rounding Into Shape

The *Analysis*, the yearly publication of the Philadelphia Textile School is rapidly taking definite form and the editors expect it to be the finest issue ever published. Much art work will appear, as well as other features new to the book. The staff is headed by Emil Pohlers, the editor, assisted by Emory A. Brewer, business manager; S. J. Stroocke, advertising manager; R. P. Hughes, photography; S. J. Woerner, art; G. W. Keegan, humor. The associate editors are M. Coikendall, W. J. Johnson, G. E. Scheer, and J. Budelman.

* * *

Personals

David H. Patterson, formerly dyeing overseer of the Belgrade Dye Works, Philadelphia, is now connected with Albra Woodcock Dye Works, Philadelphia, in the same position.

J. C. Castro, formerly second hand at the Belgrade Dye Works, is now connected with the Albra Woodcock Dye Works, Germantown, Philadelphia. His position is again that of second hand.

Mr. and Mrs. Alan Leamy have announced the marriage of their daughter, Margaret Huet, to Pierson MacDonald Grieve, Atlantic City, N. J. Mr. Grieve was a member of the class of 1926, Philadelphia Textile School.

Lowell Textile School

Student Branch of A. S. M. E. Meets

The student branch of the A. S. M. E. held a meeting recently at which several members of the sophomore class were initiated.

Following the initiation, President Thomas Joy introduced G. E. Harcke of the Air Reduction Sales Co., who gave an interesting and instructive address, accompanied with demonstrations on "Oxygen." Mr. Harcke also showed a motion picture, "Oxygen, the Wonder Worker." This film produced by the U. S. Department of the Interior in conjunction with the Air Reduction Sales Co., illustrated especially the use of oxy-acetyline flame for commercial purposes.

* * *

Class in Radio Conducted at School

The motion picture, "The Wizardry of Radio" was recently shown, through the courtesy of the publicity department of the General Electric Co. The picture was shown for the day classes in the afternoon and in the evening was shown for the class in radio. The radio class of 38 members is conducted by A. E. Wells of the engineering department for the Massachusetts Division of University Extension.

* * *

Renews Offer of Prizes in Wool Manufacturing Course

Edward A. Bigelow, an alumnus of the school, a member of the Board of Trustees, and treasurer of the Hopeville Mfg. Co., Worcester, Mass., has renewed for this year his prize offers which have been made for the last three years; $100 to the member of the graduating class from the wool manufacturing course who maintains the highest standing throughout his three years; $50 to the member of the second year class in the wool manufacturing course who maintains the highest standing during his second year; $25 to the member of the first year class in the wool manufacturing course who maintains the highest standing during his first year.

* * *

Personals

Prof. Stephen E. Smith addressed the Parent Teachers Association of the Morey Grammar School, Lowell, recently. The topic of Prof. Smith's lecture was "Uses of Cotton Fabrics."

Dr. Hollis Godfrey, president of the Engineering-Economics Foundation, recently addressed the student body on "The Value of Research."

The first of a series of dances planned in connection with the basketball games was held on Jan. 14 in Southwick Hall, following a game with Northeastern University. The committee having charge of this event included: Thomas Joy, '26, chairman; Leon M. Yacubian, '26; John F. Shea, '27; Richard F. Burtt, '27, and Harrison A. Biggi, '28. The music was furnished by the school orchestra and the patrons were President and Mrs. Charles H. Eames and Professor and Mrs. Lester H. Cushing. Professor Cushing in addition to being head of the Department of Economics and Language is in charge of athletics and physical training.

N. Bedford Textile School

Illustrated Lecture on Silk

The student body showed great interest in an illustrated lecture recently given by Principal William Smith. The subject was "Silk." From the formation of the cocoon through all processes of manufacture and preparation up to wearing. The lantern slides were loaned to the school through the courtesy of Cheney Bros., South Manchester, Conn.

* * *

Personals

Malcolm E. Campbell, Clemson, S. C., was married on Dec. 23 to Miss Jane N. Shanklin, also of Clemson. Mr. Campbell, who has charge of the textile course at Clemson College, is a graduate of the New Bedford Textile School where he won the medal presented by the National Association of Cotton Manufacturers. Miss Shanklin is the daughter of Augustus Shanklin, professor of literature at Clemson College.

Arthur R. Dickinson, '01, has been granted a leave of absence by the Clark Thread Co., of Newark, N. J., because of ill health.

Robert Pinault has resigned his position with the Passaic Print Works of Passaic, N. J., to accept a position with the American Cellulose & Chemical Mfg. Co. at Wilmington, Del.

Mr. and Mrs. James H. Burke, Fairhaven, Mass., announce the engagement of their daughter, Alice E. Burke to Stanley W. Armitage of New Bedford. Mr. Burke has just accepted the position of assistant superintendent of the Selma (N. C.) Cotton Mills. He graduated last June from the New Bedford Textile School where he was secretary of his class.

PHILADELPHIA, PA. Columbia Carpet Mills, 3rd & Cumberland Sts., ingrain carpets and art squares, wool fibre rugs and axminster rugs, are having plans for the construction of a mill building prepared by Wm. Steele & Sons Co., architects.

TEXTILE BALANCE OF TRADE

	Dec., '25	Dec., '24	12 mos. ended Dec., '25	12 mos. ended Dec., '24
EXPORTS				
Manufactures of Cotton	$12,518,766	$11,460,641	$148,238,446	$132,710,741
Wool	411,928	348,480	5,064,946	5,738,750
Silk	1,431,468	913,225	18,181,846	14,148,057
Rayon	658,211	550,546	8,700,543	7,534,944
Jute, flax, hemp, etc.	571,121	424,670	13,216,556	11,618,761
Total	$15,591,494	$13,697,565	$193,402,347	$171,751,253
IMPORTS				
Manufactures of Cotton	6,396,072	8,862,785	79,273,972	90,913,641
Wool	4,330,103	5,341,680	57,434,126	51,982,161
Silk	2,954,343	2,898,021	36,718,980	37,698,845
Rayon	1,504,716	727,440	13,121,702	5,838,838
Jute, flax, hemp, etc.	13,111,100	13,113,915	147,736,583	125,457,952
Total	$28,296,334	$30,943,841	$331,285,363	$311,891,537
Excess of Imports over Exports	12,704,840	17,246,276	137,883,016	140,140,284

NOTE.—The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

Textile World Analyst

A weekly analysis and forecast by Dr. Lewis H. Haney, Director, New York University Business Research Bureau.

The schedule of subjects for the Analyst for the next four weeks follows:

Feb. 6	*Annual Summary*
Feb. 13	*Cotton*
Feb. 20	*Wool*
Feb. 27	*Silk*

General Business Forecast Favorable

Lull in General Business an Aid to Check Overproduction—Readjustment of Relation Between Prices and Production in the Clothing Field—Cotton Mill Securities Have for the Moment Better Prospects for Profit Than Wool Mill Stocks

AT present there is a lull in business and considerable irregularity, which is as forecast by the Analyst two or three months ago. This condition is partly seasonal and partly due to doubts concerning the volume of business which may be expected in 1926. These center in the building and automobile industries, and are increased by the recent irregular decline in commodity prices. Of course, the decline in the stock market has also had its effect.

We believe, however, that within another month or two it will be recognized that conditions are sound at the bottom and that a large volume of business and industry will develop in the first half of the year. The building and automobile industries are not going to the dogs all at once. The rather stable conditions of commodity prices and the very moderate level of interest rates are both reassuring. In fact, the present lull in business should be construed as, on the whole, favorable and as tending to prevent overproduction.

SUMMARY—GENERAL

1. The general business situation is sound at bottom, and after a short period of hesitation, further gains are to be expected.

2. The retail price of clothing is too high to stimulate textile sales, while textile production is nearly as large as sales seem to warrant. Lower prices or moderate production are the alternatives.

3. Cotton mill securities will probably move higher, but wool mill earnings do not appear to justify much strength in their stocks.

Stable Prices with Large Production, a Favorable Indication

The average volume of production in manufacturing industries of the country has recently been quite irregular and the trend uncertain. Making due allowance for seasonal variations, it showed a decline in November. This leaves October as the peak month of the year. The November decline, however, was not large and resulted in a rate of production for the month which was practically the same as in July, and July was the second highest month of the year. ***Thus, the volume of manufactured goods produced continues very large.*** Present indications are that December will show no great change.

As indicated in Fig. 1, the average of commodity prices declined in December. Perhaps this decline indicates that commodity markets are on the whole well supplied. Certainly prices are not likely to rise much with the supply so ample as current production makes it.

The fall in December prices, however, was largely due to the erratic fluctuation of a group of speculative commodities, such as grain and rubber, and to the final readjustment of cotton prices to the larger crop estimate. It now seems likely that the average level of prices will be somewhat higher in January than in December.

Considering the large volume of manufacturing production, the current price level shows considerable firmness, and this may be regarded as a favorable indication. In any case, the absence of commodity inflation which is clearly apparent is reassuring as regards sustained good business.

Consumer Purchasing Gains but Clothing Seems too High

The average cost of living in the United States decreased slightly in December owing to lower retail prices for food and shelter. Nevertheless, the year 1925 ended with living costs considerably higher than at the beginning, and only a little below the highest point reached since early 1921 (Fig. 2).

The retail cost of an average family's clothing was higher in December, thus resuming the upward trend which had been checked in the preceding months. The clothing cost of living is now estimated to be exactly the same as at the Spring peak in 1923.

On the other hand, the purchasing power of consumers in the Northeast recovered considerably in December, and the trend may be said to have been slightly upward during the last quarter of 1925. Our estimate of purchasing power, however, is still much lower than in the early part of last year and far below 1923; and, while some improvement has been manifested, the existing situation can not be called favorable to the textile industry. As shown in Fig 2, the cost of clothing is above the general level of living costs and is much out of line with the trend of the consumer purchasing power.

Large Textile Output Suggests Caution

The aggregate production of textiles is now considerably above the level of our sales curves,—wholesale dry goods sales and department store sales. The textile production index includes cotton, wool, and silk, and is adjusted so as to eliminate

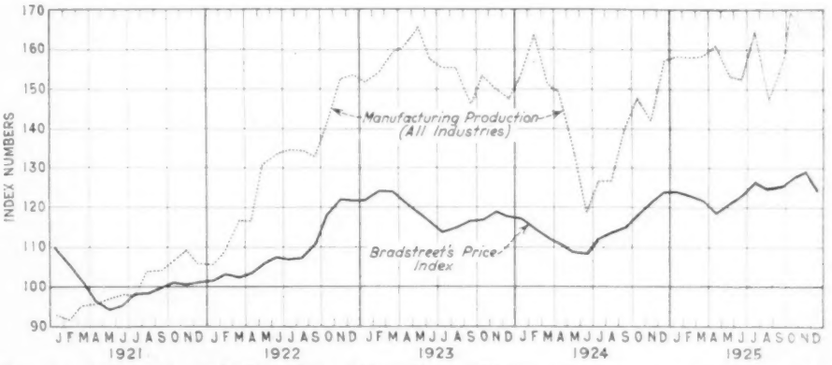

INDEX NUMBERS
170
160
150
140
130
120
110
100
90
Manufacturing Production (All Industries)
Bradstreet's Price Index
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1921
1922
1923
1924
1925

Fig. 1. GENERAL PRODUCTION AND PRICE TREND—Manufacturing Production (All Industries)—Adjusted for seasonal variation, 1921 = 100. (Federal Reserve Board.) Bradstreet's Index—wholesale commodity price, 1921 = 100.

the usual month to month variations. The December volume of textile production, so adjusted, stands at the highest point reached in 1925—indeed ***it is the highest since May 1923.*** This is due to the great activity in silk mills and to the increasing output of cotton textiles.

Textile production is still much below the level reached in early 1923, but wholesale dry goods sales are also far below their 1923 peak and production (except temporarily in February last year) is larger in comparison with wholesale business than it has been since March 1923. When it is remembered that a prolonged downward readjustment began at that time it becomes apparent that ***caution is now required on the part of manufacturers.*** It is not probable that wholesale dry goods sales will show any large increase in the near future and textile producers should, therefore, take heed lest they push production too far.

The most encouraging feature is the size of department store sales which are the largest in five years. Usually the trend of wholesale dry goods sales follows the department store sales curve. On the whole, ***the level of retail trade is reassuring, but not sufficiently so to make the warning given above unimportant.***

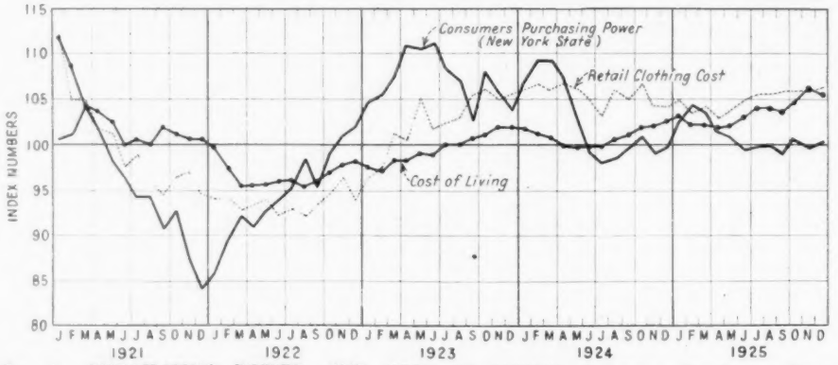

Consumers Purchasing Power (New York State)
Retail Clothing Cost
Cost of Living
INDEX NUMBERS
115
110
105
100
95
90
85
80
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1921
1922
1923
1924
1925

Fig. 2. PURCHASING POWER AND COST OF LIVING—Consumer Purchasing Power (N. Y. State)—Composite Agricultural, Wage Earners, and Manufacturers' Purchasing Power. (New York University, Bureau of Business Research.) Cost of Living (National Industrial Conference Board.) Retail Clothing Cost (National Industrial Conference Board.) Four-year average = 100 in each case.

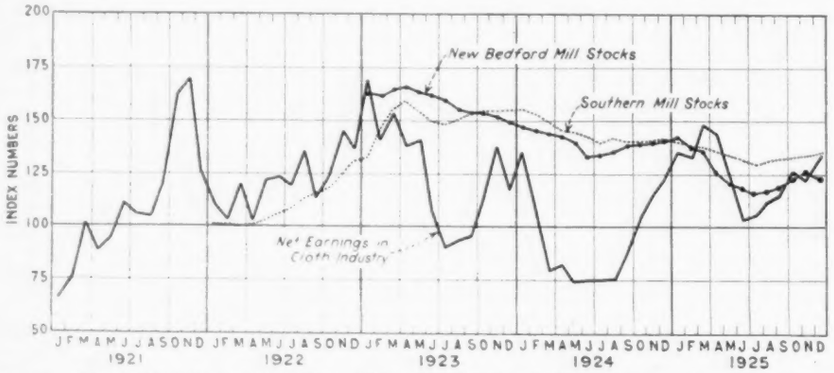

New Bedford Mill Stocks
Southern Mill Stocks
Net Earnings in Cloth Industry
INDEX NUMBERS
200
175
150
125
100
75
50
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1921
1922
1923
1924
1925

Fig. 3. COTTON MILL EARNINGS AND SECURITY PRICES—Net Earnings on Cotton Cloth Industry—Computed from the cost of raw material, labor, fuel, etc., the price of finished goods and the volume of production. (New York University, Bureau of Business Research.) New Bedford Mill Stocks—Average price 25 New Bedford Cotton Mill Stocks (Standard Statistics Co.) Southern Mill Stocks—Average price 25 Southern Cotton Mill Stocks (Standard Statistics Co.).

Rising Earnings Indicate Strong Market for Cotton Mill Stocks; Wool Manufacturing Outlook Not So Good

The trend of cotton mill earnings as estimated by the Analyst continued upward. There was a dip in our curve (Fig. 3) in November, chiefly due to a smaller margin between the price of goods and the cost of the raw material used. We estimate that the mills were then working on raw material which was relatively high. Also fuel and labor costs, as estimated, were a little higher. In part of December, too, the margin was less satisfactory, due to a decline in goods prices and the necessity of using relatively high priced raw cotton. But the increased volume of production in December tended to offset the less favorable operating margin.

January operations should show improvement as to the spread between the price of goods and the operating expenses per unit.

The prices of stocks showed divergent trends in December, the new Bedford group being lower, while Southern mill stocks increased in price.

Some irregularity is forecast for the near future, chiefly owing to the uncertainty of the general speculative situation, but ***the major trend of cotton mill stocks should be upward, and on the basis of earnings, gains should be shown in February.***

Our estimate of the net earnings in wool manufacturing made a poor showing for November. While the operating margin probably improved a little, the volume of production declined and this resulted in a downward trend in our estimate of earnings (Fig 4).

The average price of two wool mill stocks (American Woolen Common, and Arlington Mills Common) moved downward in December.

It is believed that the margin between goods prices and unit operating expenses is stabilized, but that it is not yet satisfactory. Taken together with the relatively small volume of production, the outlook for earnings is not good and does not indicate any strength in the securities of the wool manufacturing companies as a group.

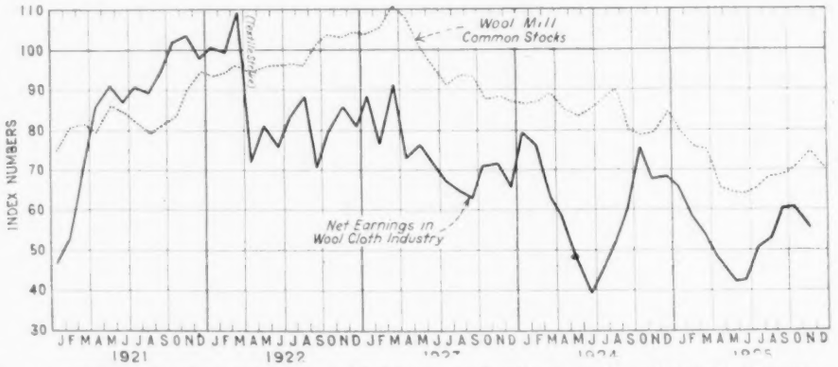

Wool Mill Common Stocks
Net Earnings in Wool Cloth Industry
INDEX NUMBERS
110
100
90
80
70
60
50
40
30
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1921
1922

Fig. 4. WOOL MANUFACTURING EARNINGS AND WOOL MILL COMMON STOCKS—Net earnings in Wool Cloth Industry—Computation in the same manner as the earnings in cotton cloth industry in Fig. 3. American Woolen Co., Common and Arlington Mills—Average of high and low Monday prices.

CONDENSED TEXTILE ITEMS

So. N. E. Textile Club's January Meeting

That the mile-haul basis of freight rates is unfair to New England industry and that transportation and freight rates constitute one of the most important problems requiring solution by the textile and other industries of that section of the country, were the main features of an interesting address by Ira Lloyd Letts, Assistant Attorney General of the United States, at the regular January meeting of the Southern New England Textile Club, held at the Biltmore Hotel, Providence, R. I., last Saturday afternoon. Not only did the speaker analyze the transportation problem in considerable detail, but he also traced the history of New England industry, showing that, while the dominant position of many New England industries has been lost during the last fifty years, the majority continued to show substantial gains and are far from being down and out. He also commented upon the alarming increase in Federal and State taxes during recent years and urged active cooperation with the administration in its efforts to eliminate unnecessary efforts and offices, consolidate departments and increase efficiency.

About 250 members and guests were present at the dinner, during the serving of which the Kalua troupe furnished music. Formal announcement of the election of Philip C. Wentworth, treasurer of the National Ring Traveler Company, Providence, R. I., as joint secretary-treasurer with W. S. Pepperell was announced by the latter. This election was in accordance with a recent change in the by-laws and division of the work makes it possible for Mr. Pepperell to retain some of the responsibilities of the offices despite his recent election as president of the Rhode Island Textile Association. President John T. Balmer, who presided, expressed optimism in the textile business outlook for 1926. The first speaker of the afternoon, whose subject was "Timely Topics of the Day," and was introduced as "Senator Ford from Missouri," was a professional humorist who handled his subject somewhat after the manner of his brother professional, Will Rogers. U. S. Attorney General Letts was the next speaker, his subject being "The Industrial Position of New England." The committee in charge of the dinner consisted of Henry C. Dexter chairman, W. C. Murphy and John F. Reardon.

* * *

Bids for Supplying Felt Asked

PHILADELPHIA.—The Philadelphia Quartermaster Depot, 21st St., and Oregon Ave., has issued proposals, asking for bids on 3,000 yds. felt, 3/8" thick and 72" wide, which should conform with specifications 415-4-9, dated May 10, 1919. Bids will be opened at the depot, Feb. 3, at 11 A. M.

* * *

Investigators of Casablancas Spinning System Have Returned

GREENVILLE, S. C., Jan. 25.—Arthur H. Cottingham, general manager of Victor-Monaghan Co., has returned from Europe where he spent several weeks with Arthur L. Emery, agent of Wamsutta Mills, New Bedford, Mass., investigating the Casablancas system for long draft spinning of cotton yarns. It is expected that the return of Mr. Cottingham and Mr. Emery and the submission of their reports will forward the plans of the United States Casablancas Syndicate which has been organized to manufacture and sell this new spinning equipment and has offices at 12 Pearl St., Boston, Mass., as announced in TEXTILE WORLD of Dec. 26.

Some of the Casablancas machinery has already been installed in Wamsutta Mills and shipments of the equipment have been made to the Monaghan plant of Victor-Monaghan Co., and the Piedmont (S. C.) Mfg. Co., where it will be installed on arrival from Spain. Messrs. Cottingham and Emery visited cotton mills in England, France and Spain and also made a short visit to Italy. They spent a good part of their time abroad with Fernando Casablancas of Hilaturas Casablancas S. A., in the company's shops at Sabadell and offices at Barcelona.

The Casablancas system of high drafting for cotton spinning eliminates from one to two of the usual roving processes, one in the case of coarse yarns and two in the case of fine yarns.

* * *

Strike at Botany Worsted Mills

About 1,500 of the 6,000 employees of the Botany Worsted Mills in Passaic, N. J., walked out last Monday in support of their demand for a return to the wage basis prevailing before the recent cut of 10% was made. The workers also demanded full recognition of the union.

Delegates of the workers called upon Charles Johnson, vice-president of the company, and presented the demands, which were refused.

The strike is the outgrowth of a systematic effort to organize the employes of the mills undertaken by outside agencies begun shortly after the wage reduction last fall. An immediate grievance was the discharge of certain members of the so-called United Front Committee of Textile Workers. Later in the week there was talk of the strike spreading to other mills.

* * *

Plans for Exhibition at Garment Men's Convention

The progress of a score of years in the garment industry will be seen in the Sixteenth Annual Textile and Machinery Exposition to be held in connection with the Convention of the International Association of Garment Manufacturers at the Hotel Sherman in Chicago on May 18, 19 and 20, according to an announcement by A. F. Allison, secretary of the association in a letter to members.

With more than 40,000 square feet of exhibition space, four times as much as in any previous exposition, the display of machinery, equipment and textiles will be the largest ever held by the association.

The number of exhibitors who have already secured space is far greater than in any previous year and indications are that four times as many firms will be represented. Textile, machinery, button, trimming, thread, needle, belting, office equipment, office form and transportation companies are already seen in the list of exhibitors and many others are waiting their assignment of space. The largest firms in their respective fields (including, American Thread Co., Bliss, Fabyan Co., Cone Export & Commission Co., Deering, Milliken & Co., U. S. Hoffman Machinery Corp., Lawrence M. Stein Co., American Loose Leaf Mfg. Co., Domore Chair Co., International Business & Machine Corp., Hawkeye Pearl Button Co., Howlett & Hockmeyer Co., Freydberg Bros., Inc., and the Missouri Belting Co.) have secured space and a number are planning extensive exhibits.

* * *

Merritt Misbranding Bill Comes Up on February 10

WASHINGTON, D. C.—The Merritt misbranding bill will be taken up in the House on Feb. 10 under the present legislative program. It will follow the McFadden banking bill which will come up on the House calendar on February 3. The Merritt bill will follow on the next succeeding calendar Wednesday unless the banking bill is not disposed of by that time.

Prospects for the enactment of the Merritt bill in the House are favorable and it is not expected that it will meet much opposition in the Senate as there is little agitation in either branch of Congress for enactment of the compulsory truth-in-fabric bill and the Merritt bill is regarded as a compromise designed to placate both advocates and opponents of compulsory truth-in-fabric legislation.

The Merritt bill is not drastic. It provides that all merchandise branded voluntarily by the manufacturer or producer must be branded honestly. It strengthens the hands of the Federal Trade Commission in some respects in its efforts to prevent misbranding but does not compel the branding or labeling of merchandise of any character.

TEXTILE MARKETS IN BRIEF

Cotton Markets: Gray goods quieter, prices holding firm; many mills well sold on print cloths for six to eight weeks and spots are difficult to uncover in certain constructions. Percales and novelty prints continue to feature finished goods market. Good volume has been done on staple finished goods for nearby deliveries. Wash goods continue slow. Flannels bought conservatively for fall.

Wool Markets: American Woolen Co. opening of overcoatings, staple worsted suitings and staple woolen suitings for fall 1926 will take place on Feb. 1. Trade looks for close figuring. Believes spring business will reawaken when fall price level is digested. Women's wear makes slow progress. Approach of openings gives worsted yarns more optimistic tone; prices unchanged and fairly stable.

Knit Goods Markets: Jobbers' operations have been conservative on hosiery, though fair business has been put through for nearby delivery; reported that cooperative buying plan of a number of jobbers is going through. Heavy-weight underwear volume restricted by numerous reports of concessions in prices, which seem to have some basis in fact; steady duplicates on light-weights. Outerwear dull; cuts in staple sweater coat prices.

Silk Markets: Sales of finished silks large and stocks in hands of manufacturers show a reduction. Prints move only fairly well, much business having been done early in the season on them resulting in less interest at the present. Revival in taffetas forecasts still greater interest for next season. Raw silk is firm with statistical position strong.

THE PERSONAL PAGE

The annual meeting of stockholders of the Arlington Mills, held at the office of the corporation in Boston, all officers were reelected as follows: President, Franklin W. Hobbs; Treasurer, Albert H. Chamberlain; Clerk, Harry A. Wright. The directors are Albert H. Chamberlain, Robert H. Gardiner, George L. Gilmore, Dudley N. Hartt, Franklin W. Hobbs, James R. Hooper, George E. Kunhardt, Charles W. Leonard, E. Kent Swift, William Whitman, William Whitman, Jr.

The interdependence of Rhode Island's larges industry, textiles, and its largest bank, The Industrial Trust Company, Providence, is illustrated by the following textile officials who are re-elected to the bank's board of directors, January 19: Ezra Dixon, Dixon Lubricating Saddle Co.; Lyman B. Goff, Union Wadding Co.; James R. MacColl, Lorraine Mfg. Co.; E. H. Rathbun, Rathbun Knitting Co.; H. A. Hoffman, Arnold, Hoffman & Co., Inc.; Alfred M. Coats, J. & P. Coats Ltd.; Frederic W. Howe, Crompton & Knowles Loom Works; Frederic L. Jenckes and Harold T. Merriman, Manville-Jenckes Co.; Charles O. Read, Sayles Finishing Plants; Andrew E. Jenckes and Herbert G. Beede, Fales & Jenks Machine Co.; Irvin S. Dunn, Dunn Worsted Mills.

J. Howell Cummings, president of J. B. Stetson Co., Philadelphia, and Geo. L. Russell, Jr., assistant treasurer, have left for a trip to Mexico, where the Stetson company does a large business.

Frank L. Nagle, chairman of the board of directors of Bragdon, Lord & Nagle Company, Inc., publishers of TEXTILE WORLD, has been elected vice-president of the Massachusetts Charitable Mechanics Association. Charles B. Burleigh, of the General Electric Company's Boston office, retired as president of the organization.

Frederick W. Easton, president of the Waypoyset Mfg. Co., Central Falls, R. I., has been elected treasurer of the company also, to fill the vacancy caused by the death of Harold C. Barnefield.

At the annual meeting of the Norwich (N. Y.) Knitting Co. Fred H. O'Hara was elected president; James C. O'Hara, vice-president; Charles H. Pflanz, secretary. The directors include the officers, H. D. Hurd, of Utica, and William P. McGrail, of New York.

Mrs. E. Sternberger, president of the Revolution Cotton Mills, Greensboro, N. C., left that city Jan. 25 for a several months pleasure trip to Japan, via Seattle, where she will take passage on one of the Pacific Mail steamers.

At the annual meeting of the Wisconsin Spinning Co., Onalaska, Wis., L. J. Killian was elected president and manager; D. Jehlen, secretary and treasurer, and W. A. Henke, vice-president. Directors include the above and Edward Schams and Frank Pierce.

Russell H. Leonard, of Boston, Mass., treasurer of the Pepperell Mfg. Co., Biddeford, Me., and Opelika, Ala., was guest of honor at a smoker given by the Junior Chamber of Commerce of Opelika recently. The principal speeches of the evening were delivered by Mr. Leonard and Charles A. Kelly, textile banker of New Bedford, who accompanied him. Mr. Leonard said he expected the mill to be in full operation by Feb. 15. He also stated that the company would spend over $10,000 in paving streets in the mill village.

At the annual meeting of stockholders of the Cascade Mills, Inc., Mooresville, N. C., the old board of directors was re-elected and H. S. Rossell and W. H. Gibson, Jr., the latter manager, were added to the board. All officers were re-elected.

Robert H. Lawson, director of the engineering department of the Hemphill Company, manufacturers of "Banner" automatic knitting machines, Pawtucket, R. I., has sailed for England on a business trip and will visit France and Germany before his return in about two months.

Thorne L. Wheeler, formerly of Wheeler & Woodruff, chemical engineers of New York, has joined the organization of Arthur D. Little Inc., chemists, engineers and managers, Cambridge, Mass. The latter company also announces the addition to its staff of Dr. A. W. Francis and Dr. Christian V. Holland. Dr. Francis was National Research Fellow in Chemistry at the Massachusetts Institute of Technology where he was engaged in work on directive influence in the benzene ring. Dr. Holland has been engaged in natural gas work.

Arthur L. Emery, agent of the Wamsutta Mills, New Bedford, Mass, and A. H. Cottingham, general manager of the Victor-Monaghan Company, Greenville, S. C., returned last week from a trip to Spain where they made a study of the Casablancas long-draft system of cotton spinning.

Due to typographical errors there were several mistakes in the item about the appointment of Herbert Lindsay, successor to Sam R. Zimmerman as purchasing agent for various mills. Mr. Lindsay is now purchasing agent for the Victor Monaghan Co., Greenville, Greer, Walhalla and Arlington, S. C.; also the Anniston (Ala.) Mfg. Co., Duncan Mills, Greenville, S. C.; Piedmont (S. C.) Mfg. Co., Seneca (S. C.) Co., Victoria Cotton Mills, Rock Hill, S. C., and Wallace Mfg. Co., Jonesville, S. C.

At the annual meeting of the Busy Bee Hosiery Co., Reading, Pa., the following directors were elected: William Coller, James L. Haggerty, Daniel Grill and Charles H. Fisher. The board reorganized and elected the following officers: President, James L. Haggerty; first vice-president, William Coller; second vice-president, David Sollenberger; treasurer, B. Dewey Good; secretary, C. H. Biehl.

The Tanner Memorial Building in Spindale, N. C., was formally opened Jan. 22 with appropriate exercises. This building was erected by Kenneth Tanner, of Spindale, Bobo Tanner, of Charlotte, and their sister, Mrs. Sarah Tanner Crawford, of Rutherfordton, as a community building in honor of their parents, Mr. and Mrs. S. B. Tanner, and brother, J. Spencer, deceased.

Deisher Knitting Mills, manufacturers of knitwear, Kutztown, Pa., elected the following officers for the current year: President, John R. Gonser; vice-president, C. F. Siegfried; secretary, Phaon S. Heffner, Kutztown; Philip D. Hock, Manatawny; Rudolph Angstadt, Dryville; Geo. A. Dreibelbis, Virginsville; Fred A Marx, Reading; and Dr. D. S. Wolfe, Shoemakersville, were elected to the board of directors.

Charles A. Cannon and David H. Blair executors of the estate of the late J. W. Cannon of Concord, head of the Cannon textile interests, who died some five years ago have brought suit against the internal revenue department for the recovery of $875,000 in income taxes paid by Mr. Cannon in 1917-1918. The suit is started in the federal court at Raleigh, N. C., J. W. Bailey who was collector of internal revenue at the time being named as defendant in the case. Mr. Blair, one of the parties bringing the suit, married a daughter of Mr. Cannon and is at present commissioner of internal revenue.

M. H. Davidson, of Boswell & Davidson, Cohoes, N. Y., sailed Jan. 23 for a Mediterranean cruise of several months duration.

Frank L. Fuller, Jr., was added to the board of directors of the Yarbrough Mills, Inc., at their first annual meeting held last week.

The Greenville, S. C. Textile Club reviewed its work during 1925 and made plans for 1926 at a meeting on the evening of Jan. 22 at the Parker High School. Officers elected for 1926 are: H. B. Jones, Union Bleachery, president; J. D. Whitmire, Mills Mill, vice-president; T. H. Quigley, Parker High School, secretary and treasurer; H. W. Mosley, Monaghan Plant, Victor-Monaghan Co., assistant secretary; and W. W. Rogers, Judson Mills, and C. E. Rickard, American Spinning Co., directors.

Peter J. Hinds, general manager of the plant of the American Thread Co., Willimantic, Conn., was married Jan. 21 to Mrs. Neil Poindexter, of Dalton, Ga., at St. Joseph's Church in Willimantic. The couple will make their home at Stamford.

Allan Little, for many years resident manager of the Georgia-Kincaid Mills, Griffin, Ga., has been appointed agent of the Dwight Mfg. Co., Alabama City, Ala., to succeed C. S. Wilkinson, who has resigned.

L. H. Beck, formerly general superintendent of the Cochran Cotton Mill Co., Cochran and Hawkinsville, Ga., is now superintendent of the Griffin (Ga.) Mfg. Co.

S. H. Sherman, of Gastonia, N. C., has been appointed superintendent of the Nelson and Whitnell Cotton Mill Companies, Lenoir, N. C., succeeding T. A. Wright who has accepted the superintendency of the Monroe (N. C.) Mills Co.

T. M. Clark, agent of the Auburn (N. Y.) Woolen Co. for a great many years has severed his connections with the company and will retire from mill life.

C. R. Roberts is now superintendent of the Ensign Cotton Mills No. 2, Hampton, Ga.

Howard M. Wood, formerly connected with the Murdock Woolen Mills, Proctorsville, Vt., as manager, has accepted a position as manager of the Auburn (N. Y.) Woolen Co.

William Harrison has been appointed superintendent of the Mohawk Mills, Inc., Burlington, N. C., to succeed J. M. Moser who resigned recently.

C. L. Kilby, general overseer in the Catawba Cotton Mills, Newton, N. C., for several years, has been promoted to the position of superintendent, succeeding the late H. G. McFalls.

H. C. Doffer has taken a position as superintendent of the Raeford (N. C.) Cotton Mills.

Max Boseman, superintendent of the Raeford (N. C.) Cotton Mills Co. has resigned and accepted a position in the Loray Division of the Manville-Jenckes Co., Gastonia, N. C.

George Markel has taken the position as assistant superintendent of the M. Y. E. Co., Inc., Fultonville, N. Y. Mr. Markel, formerly of St. Johnsville, has purchased an interest in the business.

Charles E. Snodgrass will be in charge of the new district sales office to be established by the Noe-Equl Textile Mills, Inc., of Reading, Pa., at Chattanooga.

M. D. Marshall has resigned as purchasing agent of the Champlain Silk Mills, Whitehall, N. Y. H. M. Morm will succeed him.

George A. Staples has been appointed assistant sales manager of the DuPont Rayon Co., in charge of southern territory. Mr. Staples' headquarters will be at the company's Old Hickory, Tenn. plant.

Paul P. Garst, assistant wool buyer for the Bigelow-Hartford Carpet Co., Clinton, Mass., who is attending the international wool sales in Liverpool, Eng., has been transferred to the Thompsonville (Conn.) plant of the company, effective on his return to this country early in March.

Paul M Kendrick, sales manager of belting division of the Russell Mfg. Co., Middletown, Conn., has tendered his resignation effective Jan. 30. He will engage in the real estate business in the South.

E. A. Millhouse has resigned as superintendent of the traffic department of Stephen Sanford & Sons, Inc., Amsterdam, N. Y.

The first meeting and dinner of the year of the Blackstone Valley Mills Association, which was announced to take place in the Millbury, (Mass.) Town Hall on Jan. 26, was postponed until Feb. 2.

TECHNICAL SECTION

Preparing Cotton Piece Goods for Jig Dyeing

Removal of Sizing Materials—Starches Converted into Soluble Compounds by Means of Enzymes—Types, Sources, Properties, and Commercial Forms of Enzymes—Variation in Amount of Size Contained in Goods—Desizing in Jigs and Padders—Removal of Binders Releases Other Impurities

By Herbert C. Roberts

THE degree of penetration and the evenness of dyeing of sheetings, ducks, osnaburgs, etc., depend upon the preparation of the goods previous to dyeing. All cotton contains natural impurities, such as wax and oils, pectins, tannins,

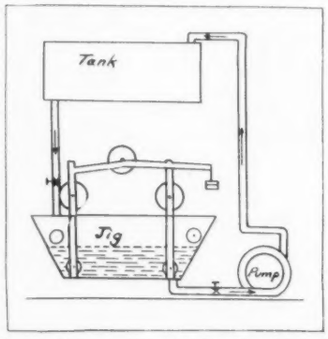


Fig. 1. Arrangement for Storing Desizing Liquor During Dyeing

dirt, and pieces of seeds. Woven goods usually contain added impurities, which envelope the yarn and must be removed before the impurities in the fibres can be reached. Slashing is extremely necessary from a weaver's standpoint and a necessary evil from a dyer's point of view. As a rule, the slashing that assists the weaver most is the type that hinders the dyer to the greatest extent.

Sizes consist of starches, gums, dextrines, waxes, fats, weight-giving materials, water-carrying compounds, and antiseptics. The starches, dextrines, and gums are the stiffening and binding agents. They make the yarn smooth and serve to carry and hold the other materials. Thus it would seem that if the starches and other binding agents were removed, the other materials would fall out or be easily removed. This is the case, and herein lies the difficulty. The stiffening agents are insoluble in the form in which they exist in the goods. Their removal consists of getting them into a soluble form.

Conversion with Enzymes

The solubilizing of starches, gums, and other binders is brought about today by converting the starches and starchy material into other chemical compounds, such as sugars, glucoses, and alcohols. The agents used to bring about these changes are called enzymes.

Physiology teaches us that the glands connected with the digestive tract of animals secrete several enzymes. These are also found in grain, such as wheat and rye, and also in fungi growths. Enzymes are unorganized chemical substances secreted by living cells, and each one has a particular function to perform. The most common enzymes made use of by textile chemists are diastase, invertase, pepsin, ptyalin, zymase, and emlusin. Some of these enzymes convert starch to sugar. Others convert glutinous material to soluble salts. Others digest proteins and convert them into soluble salts. Salts convert sugars to alcohols.

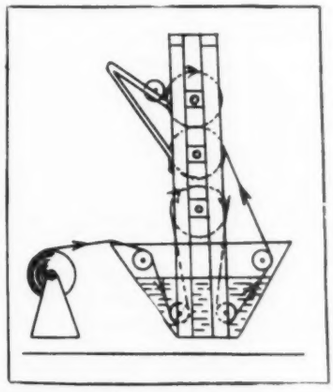


Fig. 2. Padder Arrangement Which Affords Two Squeezes and Two Impregnations

Enzymes act as catalytic agents, in one sense of the word, in that they hasten the reaction in which they take part, yet come out of the reaction unaltered in chemical structure. The action is usually one of hydrolysis.

The types of enzymic materials on the market available today for desizing textile material exist in two forms.

One type is a by-product of the brewing industry and consists of malt extracts. These malt extracts are rich in diastase enzymes. They appear on the market as a thick, heavy syrup similar in color and viscosity to molasses. The advent of the eighteenth amendment to the Federal Constitution has caused the manufacturers of brewer's materials to turn to other fields for an outlet for their goods. The textile trade has had the benefit of this act. Few manufacturers of enzymes paid exclusive attention to the textile trade before prohibition, but now the textile industry has been enriched with the experience of the brew chemists in the conversion of starches. The common trade names for the malt desizing extracts are diastafor, diax, desizo, and dimalt.

The other type of enzymes consists of thin, brown, watery liquids. They are said to contain other enzymes besides diastase which attack starch rapidly and also attack other impurities found in the goods. There are two of these products; namely, polyzime and rapidase. Polyzime is a vegetable fungus growth, and rapidase is an animal product.

Enzymes are killed by alkalies, strong acids, and extremes of temperature. Near the freezing point they are rendered dormant; but, when heated, they possess their normal functions. The thermal death point of most enzymes is 160 deg. F. Up to this point their action is hastened. Manufacturers of different products recommend a temperature ranging between 120 and 150 as the most

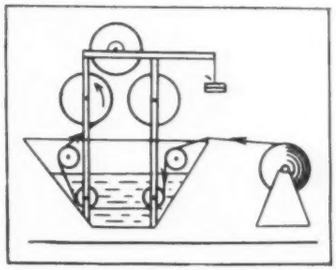


Fig. 3. Method of Passing Dry Gray Goods Through Jig for First Run

effective temperature in which to conduct the desizing operation.

Amounts of Size

The amount of size added to the warps varies with different types of merchandise and in different lots of the same merchandise. The variation is shown in the table below.

Kind of Cloth	% Size Present	Kind of Cloth	% Size Present
2.85 sheet.....	.31	1.90 osna.....	4.6
2.85 sheet.....	.63	1.90 osna.....	4.5
2.85 sheet.....	1.5	1.90 osna.....	4.5
2.85 sheet.....	1.5	8 oz. duck.....	6.95
2.85 sheet.....	2.0	8 oz. duck.....	6.8
2.85 sheet.....	2.0	8 oz. duck.....	6.7
1.90 osna.....	4.0	8 oz. duck.....	6.34
1.90 osna.....	4.0	8 oz. duck.....	6.4

Thus we find that the weight of the cloth going into the dyehouse is not always the weight of the ultimate fibres to be dyed. From the information available in these tables we cannot find a factor that would be accurate in determining the weight of the ultimate fibres to be colored.

Desizing Machines

Inasmuch as enzymes are not destroyed in solubilizing starches, a standing bath can be used for the process. The bath can be used until it becomes dirty and viscous, and can desize between 20,000 and 30,000 yards. The bath is replenished by the addition of more water and desizing material in the initial proportions.

It is therefore desirable, in order to get the maximum efficiency from the desizing agents, to reserve certain machinery exclusively for desizing. In some cases this is not considered feasible, and the same jig must be used for desizing and dyeing. The same economy in desizing agents can be had—although not the same economy in time—by connecting a pump and a tank with the jig. When the goods are desized, the remaining desizing liquor can be pumped into the tank, where it can be held until the next roll of goods is to be desized. It is then let flow by gravity to the jig. Fig. 1 shows an outline of a jig connected with a pump and tank so that the jig can be used to desize and also to dye without wasting any liquor.

A three-roll slop padder makes an ideal machine to impregnate the goods with a desizing agent. By the use of a machine of this type the goods can be given two impregnations and two

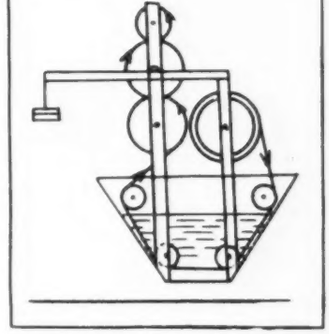


Fig. 4. The Second End

squeezes with one passage of the goods through the machine. The bowl should be sufficiently large to allow a proper depth of liquor at all times. The goods will take up between two and three times their own weight of liquor. Fig. 2 illustrates the method of passing the goods through a padder to secure two squeezes and two impregnations.

Instead of winding the goods on a

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shell, they could be folded into boxes or bins until they are ready to be dyed. The goods take up less room when they are rolled on shells; but they must be turned often, or the liquor will drain to the bottom of the roll and make it difficult to run into the dyeing jig without considerable tension applied to the shell. When a padder is used to desize the goods, there should be very little pressure applied to the squeeze rolls. The goods should be squeezed only to the extent that they will not drip.

If a padder is not available, a jig can be used. In this case, the jig should be fitted with a squeeze roll and the goods should be given two ends or runs through the desizing bath. Fig. 3 illustrates the method of passing the dry gray goods through the jig for the first run, and Fig. 4 represents the second end. The goods come from the beam roll through the liquor, then through the nip of the squeeze rolls, and finally wind up on the shell, which is driven from the top squeeze roll.

The jigs and padders used for desizing are driven from 60 to 90 yds. per min., depending upon the size and character of the roll of cloth. The ideal speed is the greatest that can be obtained without splashing liquor out of the jig or padder bowl.

Desizing Operation

The desizing bath is made up from a ½% to 2% solution of the desizing agent, depending upon the length of time the goods can remain wet before dyeing and the amount of size in the goods. This must be determined experimentally on the goods at hand and the agent to be used. The more rapid the removal, the stronger the enzymic solution must be. For example, a sateen 54 in. wide and containing 1.5 yds. to a pound of fabric is desized in three-quarters of an hour with a 2% solution. The same cloth is desized with a ½% solution by allowing the goods to remain three hours after impregnation.

The general method is to fill the jig bowl with 100 gals. of water and heat to 130 deg. F. To this is added 8 to 10 lbs. of the desizing agent. The goods are entered and given a run at this temperature. If the level of the liquor has fallen to the extent that there is danger of them running dry on the next run, more water and desizing agent is added in the initial proportions and the goods are given another run. After an interval of time, a swatch is cut from the goods and boiled a minute in clear water. The swatch is then rinsed in water and is spotted with a 5% solution of potassium iodide to which has been added a small quantity of iodine. If a deep purple color shows on the cloth, the desizing is not complete. Sample the goods in the same way at 15 min. intervals until satisfactory results are obtained.

When the desizing has reached a satisfactory stage, the goods are taken to the jig in which they are to be dyed; and, depending on the nature of the cloth and the color to be dyed, they

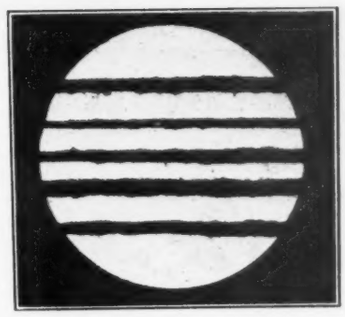

Fig. 5. Cotton Warp Threads Before Removal of the Size with Enzymes

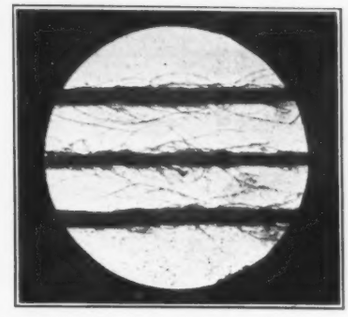

Fig. 6. Cotton Warp Threads After Removal of the Size with Enzymes

are given a run through boiling water or entered directly into the dye bath. Blacks, both direct and sulphur, are seldom boiled before being entered into the dye bath. Other heavy shades are often dyed without boiling out. When the goods are not boiled out after the desizing, the dye bath is charged with some good penetrating agent, such as pine oil and sulphonated oil.

In general, the enzymes derived from malt act slower than the ones derived from other sources. Given time enough, they prove to be equally as effective. Laboratory tests, such as the litner test for determining the diastatic power of enzymes, indicate only probabilities in regard to the behavior of the enzymes in practical, large-scale desizing operations. This is no doubt due to the components of the sizes other than starch.

Fig. 5 shows the condition of cotton warp threads before removal of the size. Fig. 6 pictures the same threads after the removal of the size with enzymes. Fig. 7 illustrates a sateen as it comes from the weaver.

Fig. 7. Photomicrograph of a Sateen as It Comes from the Weaver

Fig. 8. The Cloth Shown in Fig. 7 After Desizing

The dark, dense portions are the heavily sized warp yarns. The individual fibres are not visible, as compared with the unsized filling yarn. Fig 8 shows the same cloth after desizing. The yarns in the warp and filling are now opened and the individual fibres are visible and separated so that the dye can penetrate the goods evenly.

Blacks for Clergymen's Apparel

Origin of Demand for Imported Goods—American Blacks Readily Meet the Most Exacting Fastness Requirements

ONE of the most exacting demands made upon cloth for men's wear is that imposed upon fabrics usually worn by clergymen. Cloth intended for such use, besides possessing the usual good qualities of softness, handle, and luster, should also possess the particular shade of black that is not only pleasing to the wearer, but that has certain features of durability, the most important being fastness to light, fastness to perspiration, and fastness to weather.

It has been asserted that fabrics intended for the clerical profession could not be manufactured in this country of satisfactory quality, and that it was necessary to import. Possibly the assertion was made by parties who were unfamiliar with the actual conditions surrounding the ability of our domestic cloth manufacturers.

Equipment Formerly Limited

It is a fact that years ago, the finer qualities of black goods were imported. The underlying cause of such importations was the limited equipment of our American mills of the period, which were just about able to meet the demands for ordinary qualities of fabrics. This was true not only of blacks but of colors as well. This condition of affairs, therefore, left the market for the better qualities of fabrics open to imports.

Another circumstance that is not generally known regarding the manufacture of the finer qualities of fabrics in this country was the great disparity in wages paid to workmen here and abroad, particularly England. This condition was the prime cause of many cloth workers leaving the old country, especially men and women in the West of England, to seek employment here. Even with these thoroughly skilled work people, the mills in this country did not make any serious attempt to produce the better qualities of staple black goods, knowing full well that the production costs would not warrant the outlay. The result was that a number of years elapsed before our American manufacturers undertook to compete in quality with goods of foreign manufacture.

Scouring Operation

By way of information, let us give some consideration to the methods of the workmen in producing these finer fabrics. Let us look at the scouring operations as applied to the woven cloth. It was washed with the mildest of soaps, so as to conserve to the utmost the strength and luster of the wool; and, when it was afterwards rinsed to free it from the soap liquors, it was washed as gently as possible, so that the texture would not be altered. In our mills, *output* is the order of the day, and time is money; so that operations carried out in English mills of former days, requiring hours for their successful completion, were here done in one-fourth to one-third the time.

The writer has witnessed the washing of broadcloth in French mills by floating in the river from an overhead washhouse. Here the same cloth would be washed in much less time in a "washer," aided by strong jets of water. The reader can imagine which piece of cloth would be the better of the two. How often have American mill corporations attempted to compete by bringing over skilled dyers and finishers, only to find that these men—able in their own mills at home—were failures in this country, and that the cause of their failure was our American cry of "Output."

Coal-Tar Blacks

These conditions continued almost uninterruptedly for many years, during which time there was a gradual change from the use of the dye "logwood" to the newer and faster coal-tar blacks of the anthracene series. This revolutionized the dyeing of fast shades on black goods not only here, but in Great Britain and on the Continent. For years, logwood was the dye relied upon to produce all shades of black, not only upon wool, but upon silk and cotton as well. Its position in the dyehouse was one of great prominence; and the dyer, skilled in its application, was a man of im-

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President

JACQUES WOLF & CO.
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portance. When the blacks of coal-tar origin began to appear, it was none other than our logwood dyer friend who was at once placed on the defensive, and who went to extremes to discredit the newer productions that were destined to overthrow, in time, the commanding position of the older product.

The Logwood Dyer

It must be said, however, that, notwithstanding some of his faults, the old logwood dyer was a master of his art. To watch him add the logwood infusion to his dye kettle was an inspiration. How slowly and carefully these additions were made. The black on the piece was gradually built up, thus ensuring fastness to crocking and to light. The latter-day dyer adds the full amount of the dyeware at once. Slow dyeing, but not tardiness in dyeing, was the ideal followed. Quality was not sacrified for output.

Take a peep into the old time finishing department of a "black mill," and note the liberal use of one commodity, almost a curiosity in many plants, fuller's earth. No wonder the cloth did not crock, and that its "feel" or "handle" was soft, and that its lustre was to be envied.

Operations Simplified

When the coal-tar blacks gradually appeared, changes likewise gradually appeared, which materially aided in reducing the time necessary for the production of fine blacks on wool. Dyers both here and abroad gladly welcomed the newer products, since their use pointed the way to simplified dyehouse operations without sacrificing any of the good qualities of the older dyes. These coal-tar blacks, whether of the acid dyeing group or of the chrome dyeing group, yield shades that are the equal in every particular of those obtained from the older dyes of vegetable origin, and are in every particular superior as concerns fastness to light and the influences of weather.

That apparel for clergymen of domestic manufacture possessing satisfactory qualities cannot be obtained is a veritable libel on the output of a number of American mills making a number of grades of cloth especially for that particular trade. It must be remembered, however, that there are many grades of black cloth on the market for which no claims are made as to their possessing any particular fastness. It is absolutely unfair to judge fabrics made for a class of trade that justly expects maximum fastness and wearing qualities by other fabrics that are dyed black but for which no claims of superiority are put forward.

Since the beginning of the development of the American dye industry during the last few years, the dye chemists have done intensive work on blacks, recognizing that black is a staple "color," and goes into many lines of goods, from socks to cravats.

War Period

Like everything else during the period of the war, blacks and fancy shades suffered considerably, but in a great many instances the apparent shortcomings of the finished fabrics were due less to imperfections in the dyes used, than to the inability of the dyers to procure certain chemicals —not dyes—that were pre-empted for war purposes. The writer is acquainted with "gentlemen of the cloth" who were unfortunate in the selection of the fabrics that they wore. The black faded to a greenish tone, and in some instances to a plum shade. Some of these gentlemen looked upon the alteration in shade philosophically and as a matter of course, while others began at once to lay the blame to the American chemist for the poor dyes used, not realizing that there are other things besides dyes that are necessary to make fast shades.

When the war terminated the imports of German dyes, dyers were compelled to resort to the use of products that were unfamiliar to them, and even in some of our best and most prominent mills—where recourse was had to much of the old-time coloring matters, including logwood—wretched results were at first obtained. Later, when matters began to adjust themselves, and American-made fast blacks for wool finally appeared, complaints began to diminish, until now it can be well said that our mills do not need to seek elsewhere for dyes that, when properly applied, will yield blacks on wool of the utmost fastness.

Black dyes, both of the acid dyeing type, and of the chrome mordant type, were made from American raw materials shortly after the war began, and have been regularly used in large quantities in the majority of American mills making practically all grades of black cloth for men's wear, including fabrics for the clergy. It is a further fact, well known to clothing manufacturers and custom tailors, that American fabrics are readily obtainable that compare in every particular with fabrics of foreign origin, and this knowledge is put to practical use when some fastidious persons insist that their raiment be constructed of cloth of "foreign" make. It is shown that thousands of yards of men's wear fabrics are sold as of foreign make when the only sea voyage the goods have enjoyed was westward along Long Island Sound.

Clergymen are no exception to the general rules governing supply and demand. They are likewise attracted by prices in exactly the same way as other men, and it is possible that some may not have been as successful as others in their purchases. Such instances, however, do not in any way serve as a basis for the broad statement that good blacks for their especial wear are not made in the United States. Every cloth dyer and worsted manufacturer knows that the blacks for wool made in the United States are the equal of the corresponding types formerly imported. The blacks now made here and used in our own mills are a triumph of American chemical skill and painstaking persistence, and have contributed their worth to the fabrics dyed with them.

Viscose as a Filler

Affords Exceptionally Good Results—How Filling Material Is Prepared—Mixing, Applying, Drying, Ageing, and Dyeing

By William B. Nanson

CERTAIN classes of cotton goods can be finished or filled in the piece by wooden pulp made in the ordinary way, or, in fact, by any kind of cellulose. All that is necessary is to procure the pulp. This comes in rolls, or as matte paper pulp from the paper pulp mills. In both cases it is dry. Goods have been finished in this way for a number of years by the finishers of the old country, although it may be a new thing here. Any class of low goods may be filled by this medium; and heavy goods, such as tarpaulins, etc., may be waterproofed either with or without the aid of casein or any other adhesive. Imitation leathers of all kinds may be made with this filling. It is also used for curtains and trunk linings.

The wood pulp comes from the pulp mills dry. It is really matte paper, and is delivered in reams like any other paper. After being properly converted into cellulose xanthogene, it is made into either filler or imitation silk.

Alkali Cellulose

The dilute alkalis have no action upon cellulose if oxygen be kept from them. If it be present, however, the cellulose is converted into oxycellulose, the rate of this conversion depending entirely upon the supply of air and the temperature and also upon the concentration of the alkali. This must be considered by all bleachers when boiling cottons in alkali.

If, however, the cellulose, either from wood or cotton pulp, is treated with concentrated caustic alkaline solutions, the alkali becomes absorbed by the fibres. While this is going on, great changes in the structure and properties of the cellulose are taking place. A certain proportion of the alkali (the part corresponding to the formula $C_{12}H_{20}O_{10}2NaOH$) becomes absorbed, while the fibres swell and become shorter, thicker, and stronger. They also show an increase in elasticity. This alkali can now be removed by washing with water. This will leave a cellulose hydrate ($C_{12}H_{20}O_{10}H_2O$) behind. If the washing is carried out with alcohol in place of water, it removes only one molecule of sodium hydrate. This remaining compound is known as alkali cellulose ($C_{12}H_{20}O_{10}NaOH$), and is the starting point of viscose.

In using this as a cotton filler, it is made up entirely of wood pulp, without having starch, clay, or any other substance with it. The matte paper as it comes to us from the pulp mills is broken up and passed at once into a cold solution of caustic soda standing at about 44 deg. Tw. If it is to fill low goods, we have found it better to get 100 lbs. by weight of dry matte paper at a time, because it must be used quickly when it is made into paste form by the caustic. After it has been put through the caustic on the padder, it is chopped up fine and put in a barrel having a lid which is air-tight. Then a sufficient amount of disulphide of carbon is added to bring the paper into a glutinous form, and this must turn to a bright yellow or marigold color before it is fit for our use as a filler.

Disulphide of Carbon

The disulphide of carbon comes usually in iron drums, is liquid, and should be 100 (i. e., full) strength. It is usually used at the rate of 20% of the paper. It is fairly volatile, and is nauseous. Great care has to be taken that the barrel or other receptacle is kept as nearly air-tight as possible. The mixture must be mixed well, usually by rolling the barrel; and the cover must be lifted once in a while to examine the mixture. If it is found after a while that the mixture has not reached the right color or condition, it is necessary to add more disulphide of carbon.

When the mixture has reached the right condition, it must be taken from the barrel and rotated in a wooden receptacle furnished with wooden agitators. While this agitating is taking place, water must be added from time to time until the mixture is right in consistency and color for what is wanted, this of course being up to the finisher. He must understand that the finishing paste must be made thicker for low goods or for goods that are woven openly, and thinner for heavy goods.

After this, the mixture is taken from the agitating machine and carried in a tub to an ordinary single-color printing machine fitted with the regular padding box to hold the color. The mixture is put in to the machine in exactly the same way that color is put in for printing, except that the furnishing roll is steel instead of wood, as is usually the case. The reason for this is that the mixture, being very caustic, clings better to the steel than to the wood. The mixtures or filling paste must be quite cold. In fact, no heat must be used anywhere in the making up. The filling is printed on the cloth either by a smooth roller or by a pin-engraved or slashed roller in the way that cloth is usually printed. It is dried at the same time.

After this, the filled cloth is passed through an aniline ageing box of the type used for dyeing aniline black. The temperature is the same as that used for aniline; i. e., from 200 to 204 deg. F. This has the effect of fixing

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General Sales Department

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permanently upon the fibre the cellulose viscose mixture.

We would say here that some finishers fill the goods on a scotch mangle. This can be done, but drying is required afterwards, and thus two handlings are necessary. Filling and drying at once can be done easily on the printing machine. Moreover, it is the best method, and gives us more even results. However, owing to the action of the caustic soda, this mode of procedure causes the goods to shrink in width all the way from four to six inches.

Dyeing

After drying and ageing, the goods may be dyed into many colors, usually on the jigs. As the cloth is very stiff when it comes from the drying and ageing room, some kind of soluble oil or soap is added to the dyebath to soften up the goods. In this way, nearly all colors can be dyed; and, though the dye liquor ordinarily finds it difficult to penetrate the goods and the production may be small, the addition of softeners will mitigate the evil of hardness almost completely.

The cloth, if it is to be used for the above process, is usually taken direct and sewed together from the gray bale. However, some of the lighter colors have to be bleached first on account of the cotton seeds and motes which show up in the cotton on light-colored or dyed cottons; because it must be remembered that these motes, etc., will show up more plainly on goods that have been run through caustic soda.

It must also be remembered that all goods that are shrunk with caustic, as the above, are proportionately stronger by 20% to 40%, and that less dyestuff is required, shrunk goods having a greater affinity for the color than the plain goods.

There is no doubt that this process costs more than starching or filling with other fillers, but it is better and the filling will stay in. On this account, it is far better to use where good work is called for, or where the goods have to be dyed, etc. Curtains, for instance, which are filled and dyed with this filling, can be allowed to hang until dirty and then can be taken down, washed, dried, and hung up again as good as new. This procedure may be followed as long as the goods themselves last. Viscose can also be used on cloth as an imitation leather and for trimming all heavy goods, as such goods will stand any amount of wetting.

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*PALMER, MASS. The D. O. Pease Mfg. Co., having discontinued business, has sold its plant on South Main St., to Jarvis & Jarvis, local manufacturers of rubber tire casters and service wagons, who plan to occupy it by early spring. The machinery of the Pease Mfg. Co. is being crated for removal to Chicago.

DERRY, N. H. The New England Fibre Mills have arranged for a change of name to the Derry-Made Products, Inc., and will devote the bulk of operations to mattress manufacture. The plant is now on a capacity schedule and will continue on such a basis indefinitely.

Chats with the Textile Chemist

Development of Vat Dye Derivatives Resembling Soluble Dyes —Death of Natural Indigo—Origin of Aniline

By J. Merritt Matthews

THERE is a new feature in the matter of dyestuffs which has recently appeared, and which, if it in any large measure fulfills the expectations held for it, may well be considered as marking a new milepost in the history of dyeing. We have reference to the manufacture of soluble products of indigo and the other vat dyes that may be applied in much the same manner as other soluble dyes, and yet which furnish colors apparently identical with those obtainable with the vat dyestuffs themselves when employed in the old method of a reducing vat. It has long been recognized that the vat dyes are the crowning achievement in the field of fast colors, particularly in the matter of cotton dyeing; but their use has been so greatly restricted by the necessity of a special method of dyeing which, to say the least, is cumbersome and complicated, that they have not been adopted as widely and as universally as their excellent properties would lead one to expect.

Special Technique

The application of the vat dyes really requires a special technique which is not at the disposal of every dyer. The methods also introduce various difficulties in the way of color matching and in the matter of combinations with other classes of dyestuffs. They also impose certain limits on the form and make-up of the goods to be dyed. Loose cotton and warps, for example, may be rather conveniently and successfully handled; but when it comes to the dyeing of skein yarns and piece goods, serious difficulties are encountered, and these become almost insurmountable in the case of small wares and garments, to say nothing of household dyeing and the like.

These limitations on the employment of the vat dyes, even in the field of cotton dyeing, have greatly restricted the development of this line of dyestuff manufacture. The public has heard a great deal about the vat dyes; how fast they are; how they will even stand the operations of bleaching; and so forth and so on. But when the same public ask why the colors on this, that or the other fabric are not fast, if these vat dyes are all they are cracked up to be, the rather lame answer has to be made that such fabrics have to be dyed in the piece and this form is not properly adaptable to the use of the vat dyes, so that other and more inferior dyes have to be employed.

Of course such an answer as this does not mean much to the public, and only gives them the impression that there is a big bluff somewhere in this dyestuff business, or that they are being put upon in some manner by the dyer and manufacturer. The manufacturer on the one hand claims that there is positively no reason why colors should not be adequately fast and quotes the vat dyes to prove it, while on the other hand, he holds out to the consumer colored fabrics that are by no means fast. This is an antimony which it would take a learned metaphysician to reconcile, and simply gives the consumer the impression that this matter of fast colors consists of a great deal of talk but of very little accomplishment. And to some extent he has been quite justified in his conclusions.

Soluble Derivatives

But now there are indications that relief is at hand, for these vat dyes have at last been converted into derivatives that are soluble in water, and may be employed in much the same manner as any other dyestuff in a water dye-vat. It seems that the vat dyes are reduced to their so-called "leuco" form, and are then converted into a sort of acid salt, or what is more learnedly known as an "ester." The new form of the vat dye is not only soluble in water but is also quite stable in the air, and can therefore be transported and used without danger of deterioration. If the full advantage is taken of this matter that the premises warrant, we hope soon to see these new vat dyes widely employed in all manner of cotton dyeing, with the result of greatly raising the standard of color fastness in this province of dyeing, and of at last really satisfying the public by giving them universally what we have been talking about for a long time.

* * *

Passing of Natural Indigo

Judging from reports from India, the epitaph of the natural indigo industry is about to be written. The cross-word puzzles still carry on the old indigo tradition in exploiting the term "anil," and this has doubtless very much helped in the dissemination of a profound knowledge concerning indigo among both young and old. But there is something a little deeper to this than most of us would suspect, for the word "anil" suggests the word "aniline," a term which stands really for the whole of the modern dyestuff industry. And, as a matter of fact, the term for the most basic substance in the manufacture of our dyestuffs was derived directly from that old Portuguese derelict "anil," meaning a blue color or extract.

But how did such a rather far-fetched relation happen to be formed? There seems to be very little connection between indigo and aniline, so how did the etymological derivation arise? In the answer lies one of the little known romances of the dyestuff industry. Natural indigo, of course, in the old days, was a well-known commodity. It was largely brought into Europe from the East and to a considerable extent by Portuguese ships, for it was the Portuguese who first sailed around Africa and made commercial contact with India. In this circumstance we find the reason for the Portuguese word "anil;" but it does not explain the origin of the word "aniline."

Origin of Aniline

Indigo, being such an important substance in trade, naturally attracted the attention of scientists, and of chemists in particular. These men have a certain degree of curiosity, even about well-known substances, and this curiosity led some of them to try out various experiments with indigo. Someone even tried out the effect of distilling indigo. That is to say, it was put in a closed vessel and heated to a high temperature until it was gradually decomposed into various vapors and liquids. Among these liquids was a peculiarly smelling, oily fluid to which was given the name "aniline," because chemists in those days were educated, and had a modicum of literary learning. It was natural for them to baptize the new product with this name as a fitting gesture of their etymological erudition.

The connection between indigo and aniline was thus established. It was little thought that a firmer and much more important relation would be made at a later date and in a reverse manner. It was indeed one of the ironies of fate that this badly smelling and ugly looking oil to which the venerable indigo stood god-father with the name of "aniline," should in time give birth to the very parent who originally fathered it.

The government officials inform us with those deadly statistics of theirs that the acreage under cultivation with natural indigo has been reduced to a mere pittance as compared with what it once was, or even with what it was only a few years ago. The imports of natural indigo into the United Kingdom, which may be taken as a measure of its commercial importance and production, have fallen to the low point of 736 hundredweight in the year 1923. We quote this date because it is the last one available owing to the conservative British custom of usually being at least two years behind in all their government statistics. The imports of the natural indigo into the United States at the present time are practically nil.

MILLBURY, MASS. The Norrie Mills on South Main St., which suspended operations in March, 1925, have been taken over by the Nortex Mfg. Co., a new corporation capitalized for $200,000, composed of a group of Boston men, of which F. R. Sawyer, banker and broker, is the head. The new company started operation of the plant last week. S. Edgar Benjamin, formerly general manager of the plant, is to resume his old position and will have with him a number of the old overseers. The product will be crash goods at the outset and later it is planned to make pure linen crash. Some new machinery has already been ordered, according to Mr. Benjamin. The purchasing price was said to have been in the vicinity of $250,000.

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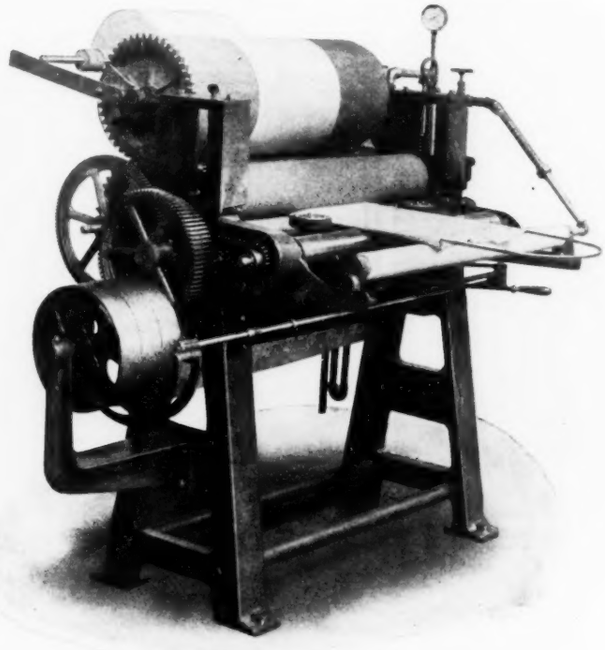
AUTO GYP
Process of Bleaching and Dyeing
IN ONE OPERATION

NEW MACHINERY AND PROCESSES

Silk Finisher

For Rayon and Other Lightweight Fabrics

The proper finishing of rayon fabrics, including celanese, has required unlimited study and experimenting. It is the final appearance of the fabric that counts most, and the finishing operation must be performed with a machine designed to produce the best results. Many of the calenders made by the Grand Rapids Textile Machinery Co., 1405 Division Ave., South, Grand Rapids, Mich., are being used for finishing these fabrics, but experience has suggested improvements to take care of this work, and after exhaustive tests and experiments, the Grand Rapids Textile Machinery Co. has perfected a new finishing machine which effects that much desired soft luster. It is known as the Shields silk finisher.



Shields Silk Finishing Machine

The manufacture and sale of rayon and other lightweight fabrics is increasing. Manufacturers who sense the magnitude and possibilities of this business will realize the necessity of providing their mills with equipment which will produce the best merchandise. The new Shields silk finishing machine forms a most important link in the chain of operations. Results obtained show that the most critical eye will be entirely satisfied with the finish and appearance obtained by the use of this machine.

In the design of this machine the builders have incorporated the method which experience has proved to be most practical for finishing rayon, celanese and other delicate and lightweight goods. The fabric is subjected to a spray of live steam as it passes over a spreader in the usual way to loosen the stitch and establish width. A pair of driven feed rolls, positioned vertically on either side of the spreader, assist in pulling the cloth along the sides of the spreader to prevent curved edges.

The fabric continues through a pair of rolls which are heated with steam and covered with felt. It then takes a three-quarter wrap around a large roll which has its surface filled with small perforations and covered with a heavy felt padding; steam supplied to the inside of this roll simmers through the padding into the fabric as it passes over. The construction of this roll prevents any water from condensed steam reaching the outer surface.

A patented arrangement for carrying away condensation insures dry steam at all times. Another roll of like size, steam-heated but not perforated, and also covered with padding acts as a dryer as the fabric passes over its surface. An arrangement for rolling up the cloth into an even roll on a paper tube is provided.

The larger rolls are driven through a change speed gear which permits varying their surface travel in relation to the smaller rolls. This is necessary because the fabric has a tendency to narrow up some after passing over the spreader, and this increases the length which must be taken up to prevent slack or wrinkled edges. This treatment gives the fabric a long and uniform contact with the steam without over-heating, takes out all wrinkles without leaving an "ironed out" effect, and produces a beautiful soft luster finish.

All parts of the machine coming in contact with steam are of brass or copper. The spreaders furnished are accurately ground on a special machine to insure perfect contact where the spreader base rests against the smaller pair of rolls. Every precaution has been taken to prevent injury to delicate fabrics. This machine is made in widths to suit requirements.

In addition to this new silk finisher, the Grand Rapids Textile Machinery Co. has brought out new knitting machine attachments, known as Shields yarn conditioner and tension take-up equalizer, which eliminate holes, imperfections, and unevenness in knitted fabrics. These work well on all yarns and are especially valuable on rayon and celanese. A description of them will be printed on this page in an early issue.

Embroidery Cutting

Feston Protected—Guide Independent of Knife

A new machine for cutting a wide variety of embroidered cloth—including double cloth, flannel, koepper, silk, tulle, net-lace, etc.—has been invented by Alois Tschbrme, St. Gall, Switzerland. The feeding mechanism and the guide are so constructed that strips with ¼ in. between or on both sides can be accurately cut. It is said that the capacity is 50 to 100 strips of 10 yds. each per hour, depending upon the texture of the cloth and the design of the embroidery.

New Embroidery Cutting Machine

It is claimed that the feston is afforded absolute protection by the feston guide. The guide is independent of the knife, and hence but one adjustment for the embroidered cloth is necessary, no attention being required by the knife. Only a very short interval of time is required for sharpening the knife, and it is not necessary to remove it from the machine. One or two sharpenings a day are sufficient.

It is claimed that the machine saves labor and makes the work easy, comfortable, and rapid. The machine occupies very little space, can be located anywhere, and calls for no fastening down. It can be operated at 1/6 h.p. or ¼ h.p.

RECENT TEXTILE PATENTS

BRAIDING machines, Carrier for. 1,568,354. C. F. Valley, Cuyahoga Falls, Ohio.

DYES of the thioindigo series, Vat. 1,568,458. A. W. Joyce, Newark, N. J.

DYESTUFFS and making same, Green sulphurized. 1,568,622. E. Reber and J. Frohlich, Basil, Switzerland.

FILAMENT drying apparatus. 1,568,686. A. A. Neidich, Edgewater Park, N. J.

FILAMENTS formed from viscose, Apparatus for treating. 1,568,687. S. A. Neidich, Edgewater Park, N. J.

HOSIERY on a circular knitting machine, Knitting full fashioned. 1,568,123. J. M. Allen, Toronto, Ont., Canada.

KNIT fabric. 1,568,693. R. Rothman, Brocklyn, N. Y.

KNITTING machine, Straight frame. 1,568,953. L. Hirsch, Weehawken, and H. Zahn, Union, N. J.

KNITTING machines, Drop stitch mechanism for. 1,568,749. W. L. Lengel, Reading, Pa.

KNITTING machines, Jack or slider for use in circular. 1, 568,480. W. Spiers, Leicester, England.

LACE with body bearing leaflike figures, Manufacture of. 1,568,048. E. Bosebeck, Barmen, Germany.

LOOM lock. 1,568,709. P. B. Clark, Columbus, Ohio.

LOOMS, Dobby for. 1,568,943. E. C. Amsden, Allston, Mass.

LOOMS, Feeler mechanism for. 1,568,637. M. L. Stone, Lawrence, Mass.

SHUTTLE check. 1,568,654. S. Chalmers, No. Andover, and F. J. Foley, Methuen, Mass.

SPINNING frames, Mechanical cushion roll for. 1,568,334. W. J. Hubbard, Yarmouth, N. S.

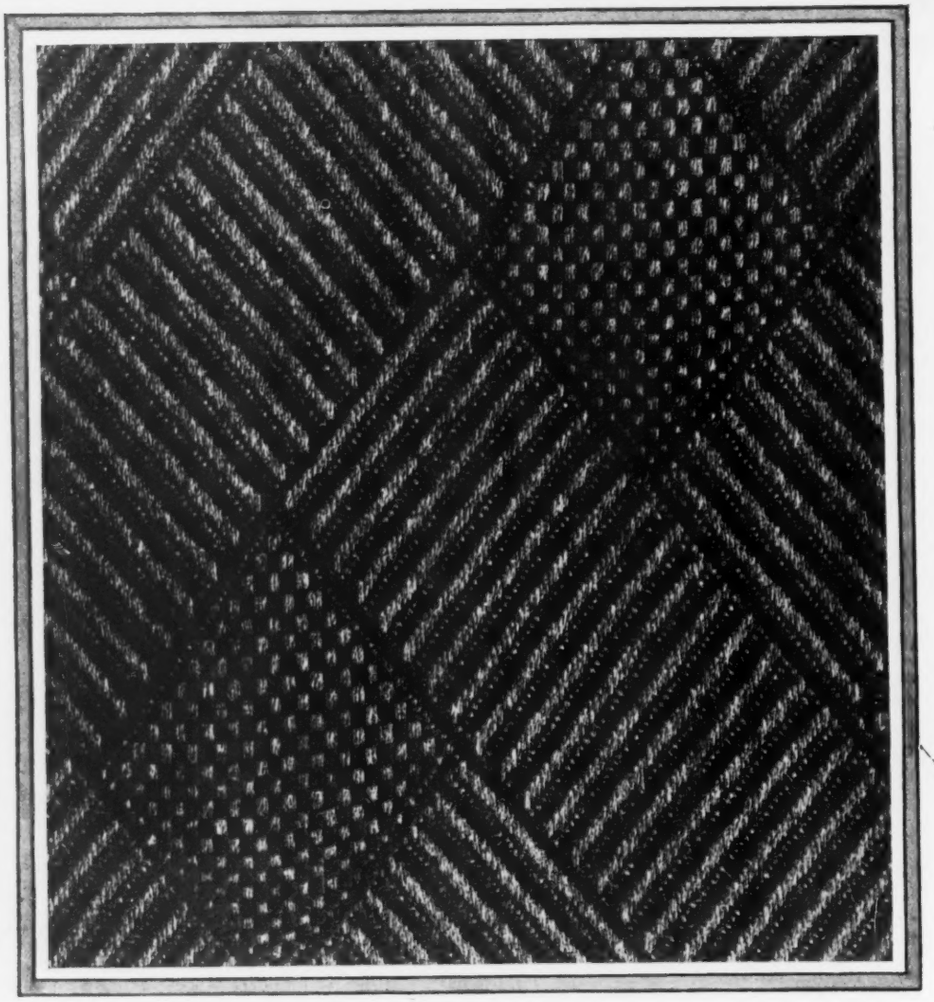
TUFT frames, Spool retarding means for. 1,568,492. E. F. Hathaway, Wellesley, Mass.

YARN cleaner. 1,568,277. L. B. Hasbrouck, Elmira, N. Y.

WARP sheets, Machine for unwinding. 1,567,113. E. E. Carlson, Chester, Pa.

WEFT carrier support and releasing device. 1,567,332. E. H. Ryon, Waltham, Mass.

YARN, Kier for the bleaching, dyeing and analogous treatment of wound. 1,567,568. J., T., and T. Brandwood, Elton, England.



The illustration shows a reversible coating of wool and Du Pont Rayon.

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WOOLS—preeminent among the great French style creators—are as decorative today, as they are practical. Threads of Du Pont Rayon, woven with wools, give contrast and new costume value.

Du Pont Rayon—strong, elastic, easy-working, and always uniform—combines with wool to produce fabrics forecast as style leaders by garment makers and retail buyers.

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QUESTIONS AND ANSWERS

CORRESPONDENCE WITH READERS

Under this head, we undertake to answer, free of charge, to the best of our ability questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld—EDITOR.

Serge Shaded Side to Center

Technical Editor:

We are dyeing blue serge in the piece and frequently have trouble with the selvages being darker than the center of the piece. These goods are dyed six pieces at a time and run in six separate strings. Very often we find one or two pieces in the set with the sides dark and the center light. The other four or five pieces are all right. These goods are carefully scoured, six at one time, and some sets are crabbed. Some are not crabbed but both show the same result. What would you suggest to overcome this trouble? (5668)

There are several conditions that might cause goods to be shaded side to center. The most common one is uneven cooling of the goods and uneven moisture content. More mills every year are cooling and conditioning their goods as the final process of finishing in order to get away from this difficulty, and maintain goods in a natural state as regards moisture. There is probably no doubt that a cooling and conditioning machine would eliminate your trouble.

In regard to your processes, first start in at the washer. See that the goods are not crowded by using a small washer. Have enough water so that the goods will run smoothly. It is best not to go over 110 deg. F. in scouring, and in washing off it is safe to use water between 70 and 80 deg. F. Too high a temperature in scouring and washing has a great tendency to cause shaded goods by felting from the sides. If the goods are felted in scouring they generally show up dark sides and light centers.

After scouring you could cut off a heading and examine the nap to see if it is uniform across the piece. Before dyeing, it is a good policy to boil out the pieces with monopole oil, glauber salts, or ammonia, to insure the best results.

For dyeing, be sure to have the correct amount of water in the kettle; insufficient water will cause felting. Bring the kettle up slowly to the boil; not less than one hour. Undue haste in bringing the kettle up quickly will cause bad work. After dyeing, cool down slowly. Oftentimes washing off too quickly will produce poor results.

If you were to tack a set of goods, dye them up, and still find you were getting shady goods, I would look to the scouring. Also observe where the pieces are running in the kettle. If the pieces that are shady are run in the same position each time, this will help to give you an idea if the dyeing is at fault. There is a bare possibility that the trouble might be due to carbonizing, but we do not think so. We would advise that you look into the benefits of the cooling and conditioning machine.

* * *

Finding Percentage of Profit

Technical Editor:

We are having an argument with reference to finding the percentage of profit; that is to say, the proper method, whether to figure the same on the selling price of the item or the cost price. If you will give us your experience in this matter, we will appreciate it very much. (5662)

A cost expert who is also a textile manufacturer replies to this question as follows: Either method is, of course, correct, depending on what you are talking about. When a man says, "I sold a horse for $200 and made 100%," he means 100% of the original cost, or $100. If, on the other hand, a business man says he did $100,000 worth of business and made a 10% profit, he normally means that he made 10% net on his gross business, or $10,000.

In our own business we figure and speak of our profits in percentages of gross business, which is the same thing as selling price. In other words, if we say that we make a 5% profit for the year, we mean that the cost of our goods and the expense of doing business consumed 95% of our gross income, and that 5% of this gross was left for profit.

In figuring our selling prices we use the same method, determining what percentage of profit we should expect on the selling price and then calculating this selling price from the cost.

This is a little more difficult mathematically than adding a definite percentage to the selling price and, as a matter of actual calculation, we multiply the selling price by the factor which gives us the percentage required on the selling price. For example, if we wish to make 10% on the selling price of an article, we multiply the cost by 1.111 plus. If we wish to make 20% on an article we must multiply the cost by 1.25.

The method of getting this factor is to subtract from the 100%, representing the selling price, the desired profit, say 10%. This leaves 90% of the selling price as representing the cost. In order to determine what factor the cost must be multiplied by to get the selling price, divide 100% by the percentage representing the cost. In this case this would be 100 divided by 90, equalling 1.111 plus.

* * *

Finishing Fine Count Shirting

Technical Editor:

I am enclosing herewith samples of fine count shirting and would like to have information showing the methods to produce this finish. (5658)

The inquirer does not state whether this fabric is woven with bleached yarns or is made in gray yarns. It is, of course, customary to make this particular class of merchandise from gray yarns and have the fabric singed and bleached in a regular finishing plant, using either peroxide bleach so as not to affect the colored stripe, or otherwise a modified alkali bleach with a very mild bleaching reagent commonly known as soda chemic. It is necessary of course as a rule to give an after-treatment if chlorine or soda chemic is used as a bleaching agent, this after-treatment consisting of passing through a bath of hydrosulphite to bring up the colors.

After bleaching and thoroughly washing, the goods are dried and should then be ready for finishing over a range consisting of 2-roll starch mangle, six drying cylinders, 90 ft. tenter with hot air drying system and housing, and winder. All of these goods require in the way of a finish about 7 to 10 lbs. of white corn dextrine, with about 10 lbs. of good grade softener and the necessary blueing to tint the white. This mixture is made up into 100 gals. of starching liquor.

Goods should then be slightly conditioned and given one run on a 5-roll calender with two chilled rolls and three combination rolls. After this process they should be allowed to cool and then are ready for putting up.

* * *

Theory of Knitted Fabrics

Technical Editor:

We are enclosing a piece of a stocking made of printed artificial silk. This silk is printed about 18 or 20 in. to each color. In the one part of the stocking you will notice the one thread torn off and you will see that the color that would run in was black and orange. Now supposing this was made on a 3½ in. cylinder. Figuring the circumference of the cylinder it figures out to about 11 in., which would mean that the orange should make nearly two courses around the cylinder and then the black should make nearly two courses around the cylinder. You can readily see by looking at this black and orange that it has made five or six courses around the cylinder. Kindly advise us what might cause this effect. (5650)

This is a simple hose leg of white and blue yarns plated over a strand of yarn dyed alternately orange and black in lengths of about 20 in. Where the white and blue yarns are broken out, the leg shows what seem to be horizontal bands about three-eighths of an inch wide, first black and then orange in a texture which is very loose.

In the inquiry, the writer has omitted one step. If the cylinder is 11 in. in circumference, how much yarn is required to knit one course, for, of course, it takes more than 11 in. of yarn to form the 220 loops around the 11 in. circumference. By counting the stitches per foot of yarn in the sample, it is possible to determine the length of one course. The stitches per foot of yarn are 70. 220÷70=3.14 ft. of yarn for each course, or 37.68 in. By measuring the yarn, it is found that the black and orange lengths total about 41 in. for an average. Then one pattern of black and orange makes just over one course. 41—37.68=3.32 in. over one course. On the basis of 70 stitches per foot of yarn, 3.32 in. will make about 19 or 20 loops.

The tendency is to have one-half of the tube black and the other half orange, but as there is a gain of about 20 needles each time, about 11 courses would carry the black portions completely around the tube to the starting position. Thus these bands which appear to be horizontal are really spirals of black and orange. These probably would be more conspicuously so on a longer piece of fabric.

* * *

Prices Paid for Seaming and Looping

Technical Editor:

Will you kindly advise us the amount paid for seaming 8-thread silk and mercerized 42-gauge full-fashioned ladies' stockings? Also price of looping the same, and greatly oblige. (5652)

The prices paid seamers are probably the most flexible in all the prices paid for operations on full-fashioned hosiery. In the first place, seaming is not merely the act of sewing up two selvages. It must be soft, flat and

A By-Product of Wine

It is in the vineyards of France that one of the important Hevo Products has its beginning. After the wine is made it is stored in huge casks. On the sides of these casks beautiful crystals are formed. It is these crystals finely powdered that we offer the trade in our Half Refined Tartar.

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Correspondence with Readers—Continued

about 16 to 18 stitches per inch for a good stocking. It will readily be understood that a machine running 10 to 12 stitches on coarse goods—and they will seam up fine goods that way if not watched—will seam more dozens per day than one on 16 to 18. Then again, some customers want the mercerized part seamed with mercerized yarn, and the silk part with silk, which will cost more to seam. The wide awake manufacturer would not make the seamer change her yarn to silk and then back to mercerized yarn, etc., but would arrange for some girls to seam the mercerized parts and others the silk parts, paying them accordingly, and so avoiding loss of time and production; also the much higher rate he would have to pay. Figuring for the inquirer a silk and mercerized garter top stocking, being seamed with mercerized or silk straight through, the average price paid seamers is about 15½c. If the hose was all silk, 20c; if the hose was 5-thread, mercerized garter top, 23c; all silk 25c per dozen. The prices paid for looping do not vary so much and would be 15½c to 16½c per dozen.

* * *

Mixing Rayon and Worsted

Technical Editor:

Can you give me any information as to the best method of mixing artificial silk and one-quarter blood, or 50s quality wool, 50/50 mixture? Will regilling the artificial silk injure it in any way? What kind of drawing machinery will give best results? Any information will be much appreciated. (5663)

The best method of mixing artificial silk and one-quarter blood wool is in top form. If a 50/50 mixture is desired, put up the same number of ends back of the first preparer gill box and gill as for straight worsted. Then put the product of the first preparer through the second preparer in the ordinary way. Recomb and put through finisher gilling and put up in top form.

If such an even mix is not required, the mixing may be done by putting through three series of gillings. This, of course, does not make anywhere as even a top, but it has the advantages of not losing the extra noilage which, of course, occurs if the stock is recombed.

If the inquirer wishes to mix the artificial silk and wool in stock form and spin on the woolen system, the best place to mix it is in the batch as for all woolen stock, making the layers thin and being very careful to take from the side of the pile as it is put through the preparatory machinery.

Regilling artificial silk certainly will injure it somewhat, cutting the stock or making neps. Skill in handling, however, can reduce this injury to a small degree.

In answer to the question as to what is the best type of drawing machinery to give the best results, it is impossible to answer unless the kind of stock used, and the method by which the yarns being spun is definitely known.

There have been a great many people who have endeavored to mix artificial silk with wool without taking extra care, and invariably it has brought trouble and spoiled stock. Only by the best of experience and painstaking effort can a result be obtained which will give not only a good yarn but a minimum of waste.

* * *

Night Work a Detriment

Editor, TEXTILE WORLD:

I have read with much interest the editorial in your issue of Dec. 19 headed "Is This a Cure for Overproduction?"

This is a subject that naturally has to be approached with some delicacy, but as something will undoubtedly have to be done along this line to prevent the evil from which the entire industry is made to suffer I am inclined to think that you would be taking a constructive step in pushing the idea.

While I can readily appreciate that so long as labor is plentiful there are a good many mills who find it economical to run both day and night, I very much doubt if in the long run the outcome from it (certainly in the majority of cases) is anything like as beneficial as is generally supposed. To run a plant both day and night is demoralizing, especially to the physical condition of the plant, and not only has its effect in the quality of goods turned out but, as you correctly state in the editorial, tends to make an oversupply of merchandise that does more harm in its competitive effect upon the market and the selling price of the goods than any profit that could possibly be derived from it. The fact that some manufacturers are sufficiently near-sighted not to care what the effect is upon the other fellow, if they can get by with it and make a profit, is in my opinion a very insidious and thoroughly wrong impression.

Taking its effect upon the industry as a whole, I venture the assertion that for every dollar made in profit from this extra night work there is in the long run a loss of more than that amount in its effect upon the market and the prices at which the goods are sold, so that in the long run instead of being an advantage it is a positive detriment that surely ought in some way to be avoided.

Yours very truly,
(C. D. 146).

Technical Editor, TEXTILE WORLD:

The special report on cotton compiled by you at our request, has been duly received. The text was covered very thoroughly and clears up many points in question. We wish to thank you for your hearty co-operation.

Yours very truly,
THE HOOVER COMPANY
W. C. Davidson
Engineering Department

Process for Piece Mercerizing Rayon Mixture Cotton Goods

MANCHESTER, ENG.
Jan. 11, 1926.

Editor, TEXTILE WORLD:

My attention has been called to an interesting article in your journal ("Field for Mercerized Yarn in Rayon Mixtures?", issue of Dec. 26), in which you make reference to mixture cloth of artificial silk and cotton, and suggest that mercerized yarn is likely to prove of growing interest in the field of artificial silk novelties.

Might I point out that an eminent British chemist, Mr. W. Marshall, F.I.C., J.P., has recently discovered that acetyl-cellulose silk, unlike all other artificial silks, is practically unaffected by strong caustic soda of mercerizing strength at ordinary temperature, and has patented the process by which artificial silk and cotton can be woven together in the piece and then piece mercerized and finished?

It is obvious that this is a very great advance, as not only can an unlimited number of effects be produced, but also it means a great saving of time and labour, and no special machinery is required for the purpose.

The American Patent No. is 1511741.

W. P. BRIDGE.

* * *

Book on Hydrogen Peroxide

Technical Editor:

Can you supply me with a treatise on the manufacture of hydrogen peroxide? (5661)

To the writer's knowledge, there are no books specializing on the manufacture of hydrogen peroxide. The various books on industrial chemistry devote some space to this subject, but it is very limited. The three methods in vogue at the present time utilize barium peroxide, sodium peroxide, and an electrolytic procedure. To prepare hydrogen peroxide is very simple, but the stabilizing is another matter, each manufacturer guarding his formula with the utmost care.

* * *

Streaked Hosiery

Technical Editor:

We are enclosing you some silk half hose that are streaked. They were dyed in a rotary dyeing machine. Can you give us any idea as to what the trouble is? (5656)

From the appearance and feel of these hose, we would say the whole trouble lies in the fact that they have been too long in the dye bath. Possibly they are redyes, as they are of different shades. If so, the prolonged boiling and working in the bath would cause this cloudiness and streakiness. Cut down on the boiling time, or better still, dye at a temperature of 190 to 200 deg. F. An excess of salt in the bath will also cause cloudiness.

New Publications

Books reviewed in this column may be obtained from the Bragdon, Lord & Nagle Co., 324 Fourth Ave., New York City.

JUDGING COAL VALUES, BY GERALD B. GOULD; The Fuel Engineering Co. of New York, New York; $3; 56p.

This is the second edition of this book, which was first published in 1921. Mr. Gould is vice-president of the Fuel Engineering Co. of New York, and he has written his book not for experienced engineers but for the ordinary business man who has something to do with the purchase of coal. The more important facts and principles regarding coal values are stated in plain, non-technical language.

The most important revision in the new work is the addition of a new chapter VI which embodies a detailed analysis of the bituminous coal market during a normal year.

RETAILING RECEIVING PRACTISE, by Norris A. Brisco and John W. Wingate. Prentice-Hall, Inc., New York. $4. 354 pages.

This book is one of the three volumes in the Retailing Series written by the same authors, the others being "Retail Buying" and "Retail Merchandising, Planning and Control." It is based upon extensive investigation into the underlying principles involved in the retail store's receiving function, and its authors acknowledge the cooperation of a number of the leading department stores of the country in the preparation of their material.

Active Cotton Spindles

WASHINGTON, D. C.—The Department of Commerce announces that according to preliminary figures 37,885,488 cotton spinning spindles were in place in the United States on Dec. 1, 1925, of which 33,000,874 were operated at some time during the month, compared with 32,802,324 for November, 32,425,206 for October, 31,551,630 for September, 31,269,714 for August, 31,760,596 for July, and 32,720,568 for December, 1924. The total number of cotton spinning spindles in place, the number active, the number of active spindle hours and the average spindle hours per spindle in place, by states, are shown in the following statement:

STATE	Spinning spindles (in thousands)		Active spindle hours for December	
	In place Dec. 31	Active during Dec.	Total	Average per spindle in place
U. S.	37,885	33,000	8,271,576,487	218
Cotton-grow'g	17,751	17,191	5,097,347,827	287
New England.	18,184	14,167	2,799,854,789	154
All other	1,949	1,642	374,373,871	192
Ala.	1,438	1,411	426,273,299	296
Conn.	1,193	1,054	212,265,416	178
Ga.	2,877	2,785	820,395,351	285
Me.	1,128	1,093	147,244,508	130
Mass.	11,585	8,635	1,698,639,281	147
N. H.	1,445	1,074	231,143,416	160
N. J.	512	478	105,936,228	207
N. Y.	991	773	181,126,592	183
N. C.	6,057	5,806	1,699,223,955	281
Pa.	153	133	26,737,859	174
R. I.	2,685	2,216	493,074,081	184
S. C.	5,329	5,289	1,670,809,443	314
Tenn.	552	511	143,500,397	260
Texas	239	225	66,647,668	278
Va.	711	691	147,696,653	208
All other	983	820	200,862,343	204

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A light, easy running, smooth carrier, but built for heavy duty work. Lane casters equipped with string guards prevent clogging.

Have stood the exactions of all departments of the Textile industry. One of our latest types to become standardized is the Dye House Truck. All metal galvanized. A solution to the dye house problem.

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(BIDWELL PATENTS)

Piles or plaits cloth or yarns into bins, tanks, or vats.

No Snarling
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MILL NEWS

COTTON

New Construction and Additions

*Birmingham, Ala. The Strowd-Holcombe Cotton Mills Co. will start full time operations about April 1, it is announced by an official of the company. Approximately $350,000 has been invested in new machinery for the manufacture of sheeting and cotton flannels. The mill will have an initial equipment of 8,500 spindles and 250 looms.

*Prattville, Ala. The Autauga Cotton Mills, which have installed 250 new looms, replacing old ones, are preparing for the electrification of the whole plant.

*Uniontown, Ala. The addition to the New Canebrake Cotton Mills is nearing completion. It is said that some new machinery will be purchased, although most of the equipment will be shipped from the plant of the California Cotton Mills Co., Oakland, Cal., which purchased the Alabama mill last fall.

*Newnan, Ga. The organization of the new cotton mill, announced in a previous issue of Textile World, is going forward steadily. A. W. Arnall, treasurer of Arnall Mills, Sargent, Ga.; Judge R. W. Freeman, president of the Newnan Cotton Mills; Roy N. Cole of R. D. Cole Mfg. Co., and other influential citizens of Newnan and vicinity have interested themselves in the proposed new mill. While plans are tentative as yet, it is understood that the organizers are considering installing 10,000 spindles and supplementary equipment to weave some heavy cotton fabric and will build a complete mill with village for employes at a site to be selected soon.

New Bedford, Mass. It is reported that the New Bedford Cotton Mills Corp. is planning an extension to its weaving department that calls for an addition 75 x 400 ft., the building to be one story high, of saw-tooth roof construction.

*Belmont, N. C. The plant of the Belmont Fabric Co., the new fancy goods weaving mill here, is nearing completion.

China Grove, N. C. The China Grove Cotton Mills Co. will double its capacity, according to announced decision of the board of directors, following the annual meeting. The spindleage will be doubled at an expenditure of approximately $850,000. A five per cent semi-annual dividend was declared at the meeting.

Norwood, N. C. The Norwood Mfg. Co. has completed the installation of some new machinery for the purpose of making higher grade yarns in its plant.

*Roseboro, N. C. The Roseboro Mills, Inc., have been chartered with authorized capital of $400,000, of which $100,500 has been subscribed by Troy I. Herring, G. A. Otter, O. E. Underwood, D. R. Tart, and several others, all of Roseboro, N. C.

Statesville, N. C. The Paola Cotton Mills, Inc., have installed three additional cards and a complete new opening system in their plant.

*Philadelphia, Pa. The new mill building which will be constructed for the Primrose Tapestry Co., Inc., at the southeast corner of Kensington Ave. and Buckius St., Frankford, designed by S. A. Stoneback, will be of brick and steel construction, two stories, on an irregularly shaped lot. Estimates have already been received.

Philadelphia, Pa. A new mill at Wayne, Mich., near Detroit, has been bought by the L. H. Gilmer Co., Tacony, manufacturers of fabric belting and tapes. It will be used largely for processing sealdedge, the weaving being done at the Philadelphia and North Wales, Pa., plants, for the present at least.

*Chester, Pa. The proposed expansion program of the Chester Lace Co., for which bids are being received up to Feb. 1, will consist of four new buildings, comprising two-story and basement winding mill, 50 x 990 ft.; two-story and basement weave shed, 58 x 300 ft.; two-story and basement finishing plant, 56 x 135 ft.; and one-story and basement bleachery, 45 x 100 ft., all of brick and reinforced concrete, Heckman & LeMaistre, Philadelphia, are architects.

Fort Mill, S. C. The plant of the Fort Mill Mfg. Co. will be enlarged, according to a recent announcement which states that the extent of the expansion will depend upon the town's ability to supply water. The Fort Mill plant will not be equipped for the manufacture of rayon mixed goods as previously reported under consideration, but production will be changed from ginghams to sheeting. Between 50 and 70 new houses will be erected in the Fort Mill village, according to latest reports.

*Greenville, S. C. The plant of the Piedmont Plush Mills is nearing completion and the installation of machinery will start soon.

Fact and Gossip

Charlotte, N. C. According to a report, the product of Mill No. 3 of the Highland Park Mfg. Co. will be changed from ginghams to dobby goods as soon as the necessary changes can be made.

Cliffside, N. C. It is reported that the Cliffside Mills, gingham manufacturers, are installing some new machinery for the manufacture of towels.

Turnersburg, N. C. D. M. Ausley, trustee, sold the property of the Laura Ellen Watts Cotton Mill Co. on Jan. 18, the mill bringing only $19,000 and the store and other property $1,600, all bought by P. C. Jurney.

Philadelphia, Pa. Clark Bros. Mfg. Co., Inc., formerly located at 215 S. American St., cotton twine, mops, jute and flax twine and cordage, has moved to 34 N. Front St., where larger facilities are available.

Philadelphia, Pa. The Wabash Mills Co., Manayunk, has sold its mill and is going out of business.

*Brattleboro, Vt. An injunction order restraining the Fort Dummer Mills from putting into effect the amendments adopted at the meeting held Jan. 15 was served on Clerk Harold E. Whitney, of the Fort Dummer Corporation, last week. Wm. H. Proctor, of Brattleboro, who opposed the proposed reorganiza-

*Indicates previous mention of project.

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which keeps off the goods—
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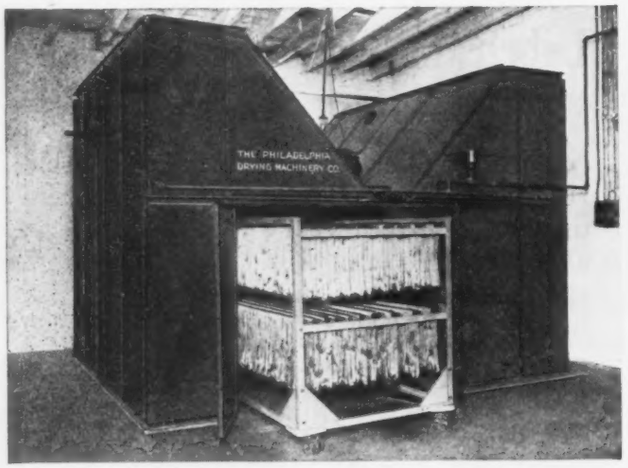

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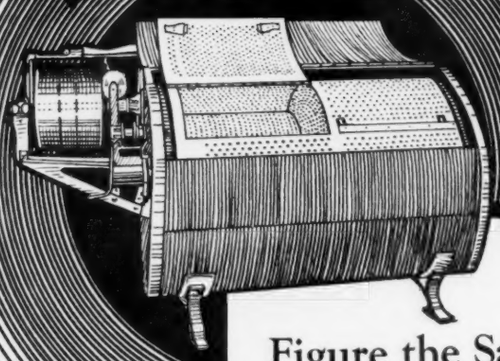

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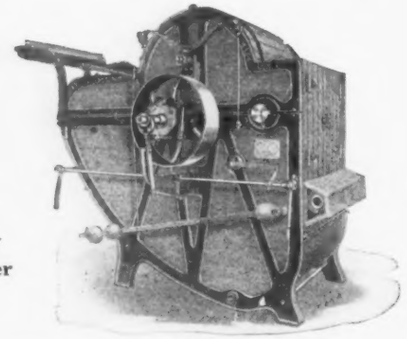

For Jersey and sweater cloths.

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RODNEY HUNT

Type MK Combination Fulling and Scouring Machine

Especially adapted for knit goods of all kinds
Handles as low as 15% wool successfully.

RODNEY HUNT MACHINE CO.
66 Mill Street **Orange, Mass.**

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Paddle and Rotary Hosiery Dyeing and Bleaching Machines

CIRCULATING TYPE
For Yarns and Raw Stock Cloth Dyeing Machines

Drying Machines For Yarns, Raw Stock Toweling and Underwear in the Piece

FABRICATED FROM ACID-PROOF METAL, THE BEST METAL FOR DYEING MACHINERY

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(Dyeing and Drying Machinery Division)
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Convincing Proof Upon Request

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Mill News—Continued

tion plan and who subsequently resigned as a director, is the plaintiff. Mr. Proctor states that under the reorganization plan, through which the Valley Falls Co. would have a controlling interest, his 55 shares of common stock, with a par value of $100 each, would be retired and common stock of no par value substituted, subject to second preferred stock. He declares the plan is unlawful.

WOOL

Fact and Gossip

COS COB, CONN. The Dent Woolen Co. has been placed in the hands of co-receivers Frank P. Wilder, of Bridgeport, and Adelbert Skene, of Stamford, by a decision handed down in the Superior Court at Bridgeport by Judge Leonard J. Nickerson. Joseph Shapiro, who is counsel for the creditors, is confident the company will emerge from its present difficulties. Attorney Max Spelke, of Stamford, is representing the company.

SANGERVILLE, ME. It is reported that the Old Town (Maine) Woolen Co. has bought the Old Colony Woolen Mills, in Sangerville, and that a son of F. W. Phelps, superintendent of the Old Town Mills, will be manager of the Sangerville plant.

WORCESTER, MASS. It is reported that woolen machinery may be installed in a portion of the plant of the Royal Worcester Corset Co., of which George E. Duffy was recently elected president, succeeding David Hale Fanning.

CLAYTON, N. J. Interests connected with the Cooper-Watts Cotton Co., operating a local mill, headed by Walter C. and William P. Watts, have organized the Clayton Woolen Mills, Inc., with capital of 500 shares of stock, no par value, to operate a local plant.

PHILADELPHIA, PA. In the voluntary bankruptcy petition of the Lehigh Spinning Co. of Philadelphia, Trenton Ave. and Rush St., woolen and merino yarn spinners, statement showed debts consisted of unsecured claims of $114,483, secured claims, $34,000, and smaller items, including taxes and wage claims; assets of $105,500, including real estate. Petition was signed by John J. Haney, Jr., vice president of the company.

KNIT

New Construction and Additions

*GADSDEN, ALA. The Davis & Alcott Co. has purchased 40 200-needle knitting machines, with fashion mark, reduced heel and mechanical latch open attachments. They cost around $35,000. The new machines will be installed in the new mill now being erected at Ninth and Gardner Sts.

LOS ANGELES, CAL. J. E. Watte, of the J. E. Watte Co., Chicago, Ill., and E. W. Stewart, formerly manager of the Lincoln Knit Goods Mills, St. Louis, Mo., have purchased a substantial interest in the Pacific Knitting Mills, Inc., in Los Angeles. At the annual stockholders' meeting on Jan. 12 both were elected to membership on the board of directors. John C. Bentz and John H. Jeffers are retaining their interest in the company and they, with L. Bentz, constitute the balance of the board. Herman Ast, formerly superintendent of the Lincoln Knit Goods Mills, has also bought some stock and has been made superintendent of operations in Los Angeles. About 10,000 sq. ft. additional space has been leased in the building in which the Pacific Knitting Mills operate and new machinery purchased in expectation of doubling their bathing suit business this year. The J. E. Watte Co. intends to sell Pacific Knitting Mills merchandise, which consists of bathing suits and sweaters, direct from the mill, and also intends to carry a stock in Chicago.

*AVERILL PARK, N. Y. The Faith Knitting Co. has completed construction of its two-story addition which was started in the fall.

*OZONE PARK, L. I., N. Y. The addition to the plant of the Merit Hosiery Co., Inc., for which plans have been filed, will be a five-story reinforced concrete building, 45x185 ft., duplicating the present structure. The building will cost approximately $200,000 and the new machinery, which has been ordered, will cost in the neighborhood of $700,000. In addition to 75 full-fashioned knitting machines, the company has purchased looping, seaming, dyeing and finishing equipment.

KERNERSVILLE, N. C. The Vance Knitting Co. has begun the construction of an addition to its plant which will practically double the capacity. It is reported the extension will cost $50,000.

*VALDESE, N. C. The 20 new knitting machines to be installed in the Martinat Hosiery Mills will arrive in groups of four, the first shipment being expected in a few days.

PHILADELPHIA, PA. Largo Hosiery Mills, 2080 Wheatsheaf Lane, a concern which started business several months ago, has 18 machines in operation to which more will be added from time to time, eventually bringing their total to 25 or more. It is a partnership composed of Harry Largman, who is treasurer of Largman Gray Co., Torresdale, Ave., & M St., full-fashioned silk hosiery manufacturers, and Joseph Largman, president of the same concern. They are manufacturing children's three-quarter hose. At the present time goods are being sold direct. Robert Phillips is superintendent and also does the buying. The mill uses electric power which they buy.

PHILADELPHIA, PA. Burlington Hosiery Mills, of the Marshall Field Corp., Kensington Ave. & O St., manufacturers of women's and men's seamless and full-fashioned hosiery, are now operating besides their 28 full-fashioned machines, 110 Banner, 111 ribbers, 25 Scott & Williams and 12 sewing machines on seamless lines. They have recently increased their seamless equipment.

PHILADELPHIA, PA. Quaker Hosiery Co., 22nd St., & Lehigh Ave., full-fashioned silk hosiery manufacturers, is starting the installation of dyeing and finishing equipment, with the intention of eventually doing all of their own dyeing.

*ALLENTOWN, PA. The American Rayon Products Corp. (not the American Rayon Silk Co., as formerly re-

* Indicates previous mention of project.

AMALIE PRODUCTS

Amalie SULPHO-TEXTOL-OIL

A DISTINCTIVELY SULPHONATED C. P. CASTOR OIL
EMBRACING IMPORTANT IMPROVEMENTS IN SULPHONATION
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These facts explain concisely the *preference* for AMALIE SULPHO TEXTOL OIL among America's foremost dyehouses.

Adapting itself *readily* under varying dyehouse conditions, our product gives to the user an absolute safety for quality production.

The following vital reasons tell you why AMALIE SULPHO TEXTOL OIL will fit in *profitably* with your dyehouse requirements—

A Very High Content of Combined Sulphate gives it an unusual degree of solubility, forming a *clear solution* in every concentration with either hot or cold water.

Being *acid proof* and *lime proof*, it resists *extremely hard water*, acids (also inorganic) and high temperature dye liquors. It will not separate out of solution and form *insoluble scums* in the dye kettle.

Glauber's salts, added to the dye bath, even in large amounts, will not "break the oil." This is extremely important in certain processes of dyeing.

Two added features of AMALIE SULPHO TEXTOL OIL are its *freedom* from stickiness and its *dependability* to leave *no objectionable odors* on the goods due to rancidity. These are common complaints with the usual sulphonated castor oils, turkey red oils, etc.

FOR BEBT DYEING RESULTS INSIST ON AMALIE SULPHO TEXTOL OIL

ITS COST IS LESS

L. SONNEBORN SONS, Inc.
Manufacturing Chemists for the Textile Industry
114 Fifth Ave.
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L. SONNEBORN SONS, INC., NEW YORK, N.Y.

DOUGLAS

CROWN

A thin boiling starch made especially for the textile trade.

Produced in the most modern and perfectly controlled plant in existence.

The result of over 20 years study and experience in the production of textile starch and its uses.

Combines quality, uniformity and economy.

We manufacture Pearl, Powdered and other standard grade starches of the highest quality.

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J. H. Almand, Atlanta, Ga.
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STARCH

Made in America

USE "CAMEL" DYES

fast to light

Level Dyeing Direct Colors

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for cotton, silk and artificial silk

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"STANDARDS EVERYWHERE"

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COPPER SULPHATE

(Blue Vitriol)

For Dyeing & Finishing of Textiles

The efficiency of Copper Sulphate as a re-agent depends upon its purity and the copper content.

"TRIANGLE" BRAND
COPPER SULPHATE is
99% PURE

NICHOLS COPPER CO.

Refiners

25 Broad St. TRIANGLE BRAND New York

Mill News—Continued

ported) has purchased the plant of the Haas-Berger Shoe Co. at 735 Pittston St. and is planning to move equipment from the present plant at 749 Pittston St. to the recently acquired building where capacity will be increased.

LEBANON, PA. John F. Taylor, of New York, has taken title to the G. Arthur Lichtenthaler tract on Weidman St., near Second St., for $4,890 for the purpose of erecting a full-fashioned hosiery mill there. Half of the purchase price is to be paid by local merchants and citizens through the Chamber of Commerce. It is said machinery has already been ordered and that work on the new plant will be started as soon as weather permits.

*READING, PA. The Reading Maid Hosiery Mill plans to start operations about Feb. 1, with an equipment of 28 full-fashioned machines. J. William Terrey, superintendent of the Vertex Hosiery Mills, Inc., of Weissport, Pa., is to be superintendent.

*SINKING SPRINGS, PA. One-half of the first unit of the new local branch mill of the H. W. Anthony Co., the building now under construction, is expected to be ready for the installation of equipment by Feb. 1 and to be in operation by the first of March. Plans call for a plant composed of five units on the five-acre tract fronting on the Lebanon Valley division of the Reading R. R. and the R. & C. branch of the Reading R. R., which the company recently purchased. This plant is to be run as a branch of the H. W. Anthony Co. and devoted entirely to the manufacture of full-fashioned hosiery.

SPRING CITY, PA. The Schuylkill Valley Mills, Inc., are asking bids on general contract for a three-story brick addition, 84 x 90 ft., to cost about $45,000. F. A. Muhlenberg, Reading, Pa., is architect.

Fact and Gossip

UTICA, N. Y. Textile mills here will be asked to grant a 15% wage increase to employes in the near future, according to J. R. White, organizer of the U. T. W., who is in charge of union work here.

GLENN ALPINE, N. C. The Glenn Alpine Hosiery Mills, Inc., have been granted a charter to manufacture and sell hosiery and all knitted goods, with authorized capital of $50,000, of which $7,500 has been subscribed by N. O. Pitts, W. S. Butler and C. V. Lael, all of Glenn Alpine.

TROY, N. C. The plant of the Troy Knitting Mill Co. has been sold to A. Leon Capel, of Troy. The machinery is for sale.

PHILADELPHIA, PA. It is reported the Hy-Quality Hosiery Mills, formerly located at 2046 E. Erie Ave., where they manufactured full-fashioned hosiery, recently taken over by the Shaughnessy Knitting Co., Watertown, N. Y., to be operated as a branch plant, will be located in the near future at North and Herbert Streets.

PHILADELPHIA, PA. The mill building on east side of B St., north of Allegheny Ave., on a lot 49 x 167 ft., has been bought by the Mammoth Hosiery Mills, manufacturers of ladies' full-fashioned hosiery, being a conveyance of the property in which they have been located heretofore.

SILK

New Construction and Additions

ALBANY, ALA. It is reported that plans are under way for the early construction of an addition to the rear of the mill of the Alabama Textile Co., to provide for a 50% increase in capacity.

STROUDSBURG, PA. The Pocono Ribbon Mill has awarded a general contract to G. Alvin Shook, of Stroudsburg, for a two-story brick addition on South 10th St., 50 x 92 ft., estimated to cost $25,000, for which foundations will soon be laid.

WILKES BARRE, PA. The local mill formerly operated by Bamford Bros. under the name Empire Silk Mill, has been rented by The Wilkes Barre Silk Co., which purchased it last spring, to a new firm known as the Wilkes Barre Weaving Co. The ribbon machinery has been removed and broad silk looms are now being installed.

Fact and Gossip

COHOES, N. Y. A silk manufacturing firm of New York is seeking a site here, according to Mayor Cosgro, who stated negotiations are now under way for leasing a building on Hudson Ave. to the company.

NEW YORK, N. Y. The firm name of S. J. Levy has been changed to S. J. Levy & Son, Richard S. Levy having joined the business conducted by his father for many years. They have moved from 71 Mercer St., to larger quarters at 41-43 E. 28th St.

PHILADELPHIA, PA. An application for a charter of incorporation will be made Feb. 23, by Horace Linton, Clark Linton and Harry A. Cills, for a company to be called Horace Linton & Bro., Inc., to manufacture ribbons and narrow fabrics. This is an incorporation of the business conducted as Horace Linton & Bro., 3061 Ruth St., where they manufacture silk and cotton narrow fabrics, ribbons, tapes, etc.

EMAUS, PA. H. D. Tremblau, Inc., is operating its mill on a full time schedule.

DYE, BLEACH AND FINISH

New Construction and Additions

*BELMONT, N. C. Installation of machinery in the new plant of the Belmont Processing Co., which will mercerize, bleach and dye single and ply yarns up to 100s, has been started, as the work on the buildings and village is practically complete.

*MOUNT HOLLY, N. C. American Yarn & Processing Co. has completed installation of a new warp mercerizing range and complementary equipment which will double its production of mercerized yarns.

PROVIDENCE, R. I. The Franklin Process Co. has filed plans for improvements in its mill on Eddy St., to include the installation of a mezzanine floor for increased working space.

*PROVIDENCE, R. I. The United States Finishing Co. is laying foundations for its new office building, estimated to cost $15,000.

*Indicates previous mention of project.

BLEACHERS!

You can prevent Iron Stains in the Kier by Mixing in the Charge

Extractol J an oil

Extractol M a powder

Write us for working samples and directions, telling us class of goods you are running.

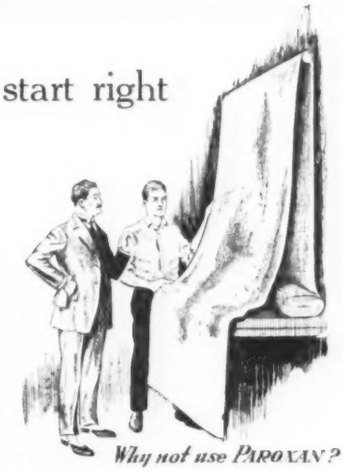
Dyers: Extractol J used alone is an excellent boiling out oil and works to perfection in the dye bath. You can get a sample by asking for it.

Southeastern Chemical Works

Mfgrs. of Oils for Textile and Paper Industries

WILMINGTON, N. C.

start right



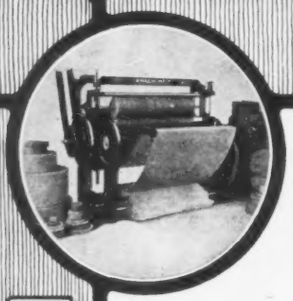
Why not use PAROXAN?

Save the goods and insure results by putting PAROXAN in the soap bath. The finisher who tries PAROXAN on worsteds, woolens, felts, mohair and cotton goods knows the saving in time, labor, soap and fuel. Level dyeing and no oil or grease spots when PAROXAN is used.

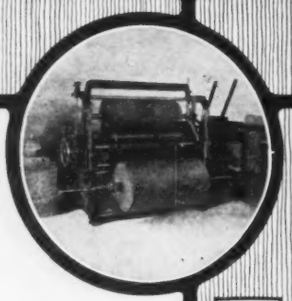
Write for informative literature.

ERNST Bischoff CO. INC.

135 HUDSON ST NEW YORK N.Y.



STRIPS



TAPES

STRIP CUTTING

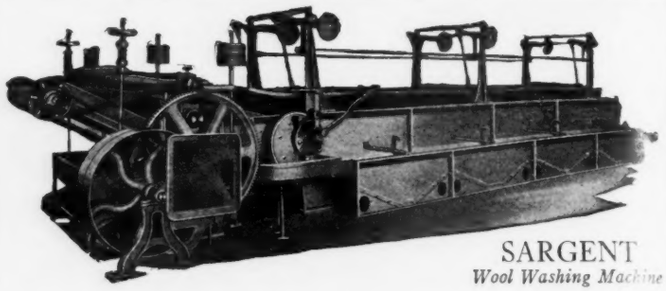
The market for fabrics in strip, rewound into rolls, is steadily increasing and is already of important proportions. Economical production of the strip consumed by manufacturers of bags, flags, clothing, corsets, ribbons, tapes, and so on, demands an efficient slitting and roll-winding machine—CAMACHINE for short.

Textile men who use our CAMACHINE Universal Type 6 declare that it will handle practically every textile roll requirement, eliminating waste of time and material.

If you use fabrics in strip or roll form, or can market your product partially in roll form, let us give you prices and information on the size and type of CAMACHINE best suited to your needs. Complete literature is yours for a postal card; the suggestions you get from it may be worth dollars and cents to you.

CAMERON
MACHINE COMPANY
61 POPLAR STREET, BROOKLYN, N.Y.

TRADE CAMACHINE MARK



SARGENT
Wool Washing Machine

Whether it's 1,500 or 25,000—

No matter what amount of wool you wash daily, if it's between 1,500 and 25,000 lbs. there is a Sargent Wool Washing Machine to do your work, and do it more economically and with greater speed than you have been making.

The steep inclined, multiple hopper bottoms on Sargent Suspended Rake Models 34 and 35, add 30% to the liquor capacity and permit the machine to be operated practically ⅓ longer before the liquor is spent.

An entire day's run without stopping the machine to draw off the liquor is no unusual occurrence when Sargent Wool Washing Machines are used. When sediment gathers, it can be removed and clean water can be introduced into the Side Settling Tanks without either of these operations delaying the washing process.

Let us tell you further how you can obtain that clean wool that gives the best results in the carding and spinning operations and produces the best woolens and worsteds. A line to us will bring our catalog and much additional information.

C. G. SARGENT'S SONS CORP., Graniteville, Mass.

TEXTILE BANKING COMPANY

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When you need them—whether it is a Hank counter or a Pick counter you will find those made by this company the most dependable and accurate.

Have you seen the double pick counter made by Root.

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WOOL GOODS MARKETS

Women's Wear Makes Progress Slowly

Gradual Business for Spring Favors Sheen Twills—Meeting Silk Competition

Progress in women's wear is gradual but in some quarters fairly definite. It is difficult to pick out the one or two outstanding fabrics for spring and because of the resulting uncertainty there are many garment makers who will not go forward with their spring preparations. Those who have made their decisions favor the sheen twill for much of their business in coats, suits and dresses and they look for gray, rose, green and blue, together with the pastel shades to take leading places in the color scheme. Jobbers also seem averse to taking definite action and as a result no second hand accumulations are being built up to satisfy the last minute call when it may be too late to get goods through the looms. Belief is strong among sellers that garment trade business will move along gradually culminating in a fairly active interest in spring goods during March.

Competition with silks is the season's most pertinent problem and the growing success is noted of the sheer novelties which are closely allied to silks in their feel, appearance, drape and style inspiration. Competition on novelties will of course be keen for the big staple mills are going further and further each season into highly styled fabrics. The problem of carrying along a big mass production on fancies when garment makers are buying close to their needs, is one to tax the most skilled merchant and manufacturer.

There is no reason to expect fall season openings of women's wear for a number of weeks yet. The American Woolen Co. may act in Dept. 4 near the end of February. But the lines which will appear before March will be limited in number.

Women's Wear Notes

Among the outstanding developments for spring are the following three characteristic trends, according to the Fashion Service Department of the Botany Worsted Mills: 1. The topcoat, which contrasts definitely with the plain or novel fabric of the dress beneath. 2. Exactly matched coat or cape with the dress, in self-tone or one, two or three related shades. 3. Sharply contrasted coat and dress, with hat and accessories exactly matched to one or the other. "All three trends unmistakably uphold the ensemble idea without literal interpretation," the company states. "Luxurious, smooth-face cloths continue in both formal and sports wear. Chief among these are the cashmeres and various weights of suede-finish fabric. Following closely are the lustrous twills in both plain worsted and the rayon mixtures, and superfine reps are found in all representative collections."

* * *

William Wilfling, until the change, president and manager of the Quality Piece Dye Works, Woonsocket, R. I., has been added to the staff of the Pacific Mills, Lawrence, Mass., where he will superintend the dyeing and finishing of worsteds. He was formerly with the Botany Worsted Mills.

* * *

H. A. Caesar & Co., factors, have moved from 50 Union Square to the new building at 244 Madison Ave., at 38th Street. The new location places them at a strategic point for access to the women's wear trades. The house was founded in 1887 at 454 Broome Street.

* * *

Donald C. Mitchell of the Cyril Johnson Woolen Co. was reelected president of the Tolland County (Conn.) Manufacturers' Association, at the annual meeting held in Hartford last week.

* * *

Edwin C. Parker is connected with the style department of Terhune, Yereance & Wolff.

F. & H. Sports Fabric Book is Issued

The spring, 1926, Sports Fabrics Edition of Fabrics & Colors which is published for the information of the sales and advertising staffs of retail stores was issued last week by the Forstmann & Huffmann Co. The regular edition, embodying the range of more dressy fabrics, will be published soon. In commenting on the sports fabrics, the Forstmann & Huffmann Co. states:

"These fabrics have been designed primarily to meet the needs of the discriminating woman and to afford designers an opportunity for developing models in which beauty of fabrics and line are uppermost. Remarkable tailoring qualities and an unusual softness of touch are characteristic of the new fabrics. The dress weights are featherlight in both the

(*Continued on page* 95)

American to Open Fall Lines on Feb. 1

Men's Wear Houses Await Showing with Great Interest—Plan Uniform Sales Contract

As intimated in this column last week the first opening of the regular lines for the fall, 1926, season, by the American Woolen Co. is to take place next week. The lines to be shown are, in accordance with last week's forecast, the worsted lines in Dept. 1 and the woolen overcoating lines in Dept. 3. In addition to these are staple woolen suitings in Dept. 3 and a few of the specialty lines in Dept. 7. The date of the opening is Monday, Feb. 1. Details will be given in this column next week. The prospect that prices will be figured on a close basis is held with a feeling of certainty by many in the industry, and selling agents who have previously sold overcoatings for next fall at definite prices are a little uneasy until they see just what the big company has done. A number of sellers who have done an advance business have taken orders subject to the later established market levels. So far as grand totals are concerned it is not believed that this business comes to any great figures.

The last week of January has been an exceedingly quiet one in general men's wear circles so far as actual business accomplished is concerned. It has been an active one so far as preparation is concerned and it is general belief that there will be a large number of openings during the week or ten days following the American's announcement. Many mill agents are ready with their fall samples, but their thought is on the expected stability the fall opening will give to the more immediate spring situation, rather than on the possibilities of a volume trade in the fall season itself. The fact that clothiers are not disposed to order ahead as formerly has been drummed into the consciousness of the trade.

Expected price levels as generally considered in the market are 7½ to 12½% off of a year ago on woolen overcoatings, 5 to 10% off on woolen suitings, and 2½ to 5% off on worsteds. The trade is often wrong and there is no claim for infallibility of these estimates.

Much thought has lately been expended on development of a uniform sales contract to replace the copy of order. Because this is the result of a cooperative movement it now has some hopes for success. The sales contract would, agents believe, clarify many of the shadowy points in the present relations of buyer and seller, when any difference of opinion comes up over goods ordered. There are many of the agents who champion the buyer's view and all agree that the contract must perform a service to the industry of which the selling agents are only one part before it can hope for general adoption and success.

BRADFORD NEWS BY CABLE

Bradford, Eng., Jan. 27 (Special Cable to TEXTILE WORLD).—Piece goods trade is generally quiet. Worsted manufacturers are fairly well employed on current contracts. Woolen manufacturers are curtailing production of heavier goods owing to poor trade with Far East.

Men's Wear Notes

The American Woolen Co. on Monday, Feb. 1, will open for fall, 1926, the following lines by departments: Dept. 1, serges, frenchbacks, worsted overcoatings, unfinished worsteds and cheviots in plain and fancy weaves; Dept. 3, staple, plain and fancyback overcoatings, shirtings and mackinaws; piecedye staple suitings and uniform cloths; Dept. 7, plain and fancyback woolen overcoatings, worsted overcoatings and London shrunk staple suitings.

* * *

Joseph Frankel, head of Frankel Bros., New York, manufacturers of clothing, is retiring from the clothing business to devote himself to a real estate development on Long Island. The business will be carried on by his brothers, Harry, Sam and Ike Frankel. A fifth brother, Dave Frankel, has made arrangements to take over the entire distribution of the "Foresome" line of sports clothing made by Frankel Bros.

* * *

B. Priestly & Co., Inc., have opened imported lines of fall overcoatings, suitings, etc. Thistletwist suitings, 16 oz., range from $3.75 to $4. Topcoatings range upward from $2.25. Worsted back overcoatings are at $7.15. Overcoatings, 24 oz., are at $3 and 30-32 oz. at $3.50 to $6. Prices are net.

* * *

The annual financial report of Hart, Schaffner & Marx for the fiscal year ended Nov. 30, 1925, shows net profits as $1,854,446. This figure indicates a decline of $186,937 from net earnings for the preceding fiscal year.

* * *

Maurice Gladstone is now associated with E. Schwarz, selling agent assisting in styling and selling.

WESTERLY, R. I. The Pawcatuck Woolen Mills have been sold to Firth B. Rollinson, of South Kingstown, R. I. The plant has been owned and operated for the last 24 years by members of the firm of Battey, Trull & Co., New York, who have also been selling agents.

Accurate heat control for process work

The high heat conducting qualities of Bucyrus Copper Kettles make them score high for the exacting finishing processes in the mill. Heat control is simple.

This is one vital reason why you should specify these copper kettles for your finishing needs. Another is their great durability. The highest grade Lake Superior Copper is employed—hard hammered and highly polished. Seams, handles and fittings hold true. Wrought iron for the bases, valves and fittings of bronze or brass—incidentals that make for ***wear.***

Various models—stationary, tilting, stirrer-equipped. Shall we send full details?

The Bucyrus Copper Kettle Works Co.
Bucyrus, Ohio

BUCYRUS COPPER KETTLES

GLASCOTE

Glascote Glass Lined Equipment for Textile Plants, Dyers, Cleaners, and Allied Industries

Acid resisting Green Glascote fused permanently into steel shells of any commercial form or capacity provides a chemically inert and physically durable lining for mixing and storage tanks where metallic reactions, contamination and evaporation must be avoided.

Open or closed tanks, with or without agitators and heaters, are standard in many forms and capacities, and rectangular horizontal vats for storage or dipping can be supplied.

NEW GLASCOTE COVERED STORAGE TANK

This unit is ideally suited for the storage of volatile liquids that must be protected from evaporation. It has a quick opening, airtight cover, made of spun copper, hot tinned, and provided with special clamps and rubber gasket. Capacities 20 to 100 gallons. Mixing apparatus can be installed.

State your requirements and get a special bulletin

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When colors look dull—

you often blame the dye. You don't stop to realize the condition of your water. Dirt, grease and grit leave their marks. They make the dye spotty, the color dull.

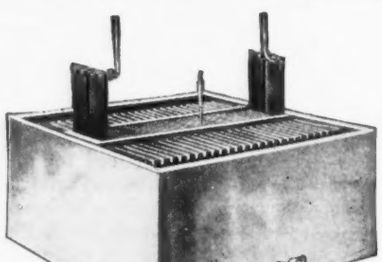
Install a Norwood Filter and note the immediate change. ***All*** suspended matter is removed. The clear, sparkling water is pure enough to drink. The dye bath produces bright rich colors; delicate tints conform to color specifications.

From an economical standpoint the Norwood Filter is a money-saving investment. The cleaned water requires less soap, dye and chemicals. It reduces the number of "seconds."

Estimates and recommendations submitted without obligation

NORWOOD ENGINEERING COMPANY
FLORENCE, MASS., U. S. A.

Improvement in Bleaching Methods



With the use of our Electrolytic cells, which produce a neutral Sodium Hypochlorite out of salt water, a number of advantages are obtained, some of which are:

Saving of 25% in the amount of sour.
Saving in the amount of chlorine.
No insoluble lime deposits.
Reduction of shrinkage in knit goods.

and many others.

Guarantee.

We positively guarantee that our electrolytic cells will produce sodium hypochlorite cheaper than any other type on the market.

A suitable outfit for any use or capacity

Write for information

The Electro Chemical Co.
Dayton, Ohio, U. S. A.

SILK GOODS MARKETS

All Plain Silks In Strong Position

Prints Only Silk Item That Lags at Moment—Fair Demand but Not Up to Expectations

Further progress was made last week in silks and as January nears its close, the market finds itself in a very strong and satisfactory position. All plain materials have done well, having exceeded the expectations of sellers in many instances, and these expectations were by no means modest. About the only laggard in the silk offering has been the prints. These have done fairly well but so far, according to unprejudiced opinion, sales have not been so large as counted upon. A considerable volume of print business was accomplished during November and December and the present quiet may be simply a lull while the market digests the quantities absorbed earlier in the season.

Flat crepe, crepe-de-Chine, and georgette accounts for the bulk of the sales at present. Outside of the sheer weaves, flat crepe is the dominant fabric just as the crepe satins were a year ago. A considerable proportion of the crepe-de-Chine being made up today is woven and given a flat finish. Demand is exceptionally large both from the cutting up trade and from the stores. The dress houses are using tremendous quantities of flat crepe and crepe-de-Chine and manufacturers in many cases find themselves in the enviable position of being sold up for a month to come. This is about as far ahead as they would care to sell at the present, preferring to take their chances on the market being slightly higher in another month. If the market was lower or if demand fell off these so-called contracts would amount to little or nothing so they have something to gain and nothing to lose by refusing to contract their production too far forward.

A feature of the market during December and January has been the strong call noted for taffetas. This demand has cleaned out such stocks as were held around the market and in a majority of cases mills have had to put additional looms on taffetas to take care of the increased buying. Dress houses are using the lighter and more supple qualities for dresses in combination with georgette or in all taffeta models. The heavier taffetas are being used in coats which is something decidedly new. This spurt has been something of a surprise for any revival of taffetas was not looked for earlier than next season.

SILK SITUATION AT A GLANCE

PRODUCTION:	**Unchanged at close to peak**
DEMAND:	**Very good**
STOCKS:	**Smaller, fairly large quantities of prints held**
RAW SILK:	**Stocks smaller, prices firmer**
SENTIMENT:	**Very strong, trade well pleased with way season is developing**

ACTIVE SILK STOCKS ON NEW YORK STOCK EXCHANGE
(Week ending Jan. 26th)

1926 High	1926 Low	Stock	Sales	High	Low	Last
39¾	37⅛	Belding Bros.....	9,300	38⅜	37⅛	38
32⅞	20	Century Ribbon Mills	8,100	27	20	22⅝
47⅝	40⅛	Julius Kayser & Co...	4,000	45¾	43½	45⅛
28⅛	24¼	H. R. Mallinson & Co.	600	24½	24¼	24¼
21	20	Van Raalte & Co.....	100	21	21	21

Spongers Desire to Cooperate With Mill Agents

The Textile Finishers' Association, the body of New York spongers, at its annual general meeting on Monday, discussed the complaints recently made by woolen and worsted sales agents regarding the part alleged to be played in return of merchandise by spongers. While the feeling was that practices of an unethical nature were not participated in by spongers, as a whole, it was thought that an interchange of ideas between the selling agents and the spongers would help.

Accordingly a committee was appointed consisting of Max J. Schneider, of the Merit Cloth Examining & Shrinking Works, Inc., and Herman Moritz of the Ajax Examining & Shrinking Corp., to confer with the American Association of Woolen and Worsted Manufacturers on questions pertaining to examinations, returns and claims, and to cooperate in all matters calculated to serve the interests of all engaged in the woolen and worsted industry. This committee was authorized to get in touch with the woolen and worsted association.

Max J. Schneider was unanimously re-elected president of the finishers' organization, and the other officers elected were: Meyer Breslin, L. & L. Cloth Examiners, Shrinkers & Refinishers, Inc., vice-president: A. Fergus, Royal Cloth Shrinking Works, treasurer, and David J. Barzilay, Metropolitan Sponging Corp. secretary.

Kent Mfg. Co. Receives Leggin Award

The Philadelphia Quartermaster Depot, 21st St. & Oregon Ave., has awarded contract for 36,200 yds. olive drab leggin cloth to the Kent Mfg. Co., Clifton Heights, Pa., on which bids were opened at the depot Jan. 21. The Kent bid, the lowest of the six received at the opening of proposals, was $2.67½ per yd., net, with delivery beginning in 60 days at the rate of 10,000 yds., monthly.

Textile Tourney at Greenville Begins February 11th

GREENVILLE, S. C.—The annual basketball tournament of the Southern Textile Athletic Association, to be held here Feb. 11, 12 and 13 is rousing considerable enthusiasm in southern textile circles, it is indicated at headquarters here. Forty-eight boys' and girls' teams have been entered.

SUMMARY OF SILK CABLES

Best No. 1/X-Yokohama.....1920 Yen
Exchange at 3 m/s.....45⅝
Cost C. I. F. New York.....$6.93

Cables reported a firm market in Yokohama, considering the further advance in Yen exchange which moved up to a new high for the year. Transactions amounted to about 3,200 bales in the open market, not a large quantity, but sufficient to maintain prices within 10 Yen of those noted at the close of the previous week. At the close of the period some underselling was reported on the basis of 1920 Yen for Best No. 1/X this being generally considered the ruling market level. The Bourse was higher for week in spite of the ⅜ of a point advance in the Yen. Cantons were more active in the Shanghai market and prices were 20 Mex. Dollars higher. Buying was fairly heavy in response to the inquiry noted in New York. The situation in Shanghai is firm with holders refusing lower prices in spite of substantial stocks.

Raw Silk Higher

Higher Exchange Causes General Advance in Quotations

An increase in the laid down cost of silk resulting from the advance in exchange was responsible for a general rise in prices in the New York market. Though the market quotations appeared to be from 5 to 10c higher depending on the importer. The market was somewhat more active and more confident buying was noted in many directions. Considerable business was booked against February requirements with manufacturers in some cases willing to consider March deliveries. The trade here is apparently taking cognizance of the very evident strength in the statistical position of the Japan market and with sales expanding in the finished goods, more inclined to take a moderately long position.

Canton raws were active over the last half of the week and prices advanced both here and abroad. The 14/16 grade noted the greater part of the buying which was in sufficient volume to advance prices 10c a pound. New York prices varied greatly but 14/16s were offered close to $5.10 N. Y. terms at one time. By the end of the week $5.25 was the ruling level.

(90 days basis)

Japan Filature, Grand Double Extra.	13/15	$7 30
Japan Filature, Crack Double Extra.	13/15	7 10
Japan Filature, Double Extra.....	13/15	7 05
Japan Filature, Best X.....	13/15	6 97½
Japan Filature, X.....	13/15	6 90
Japan Filature, Best No. 1/X.....	13/15	6 87½
Canton Filature, New Style.....	13/16	5 25
Canton Filature, New Style.....	20/22	4 80
Italian Grand Extra Classical.....		7 30
Tsatlee Reeel, "Blue Dragon and Flying Horse".....		4 80
Tussah Filature, eight cocoon.....		2 95

Figures on 1925 Record Imports of Raw Silk

WASHINGTON, D. C.—Raw silk imports last year amounted to 63,764,000 lbs., a record volume and an increase of 24% over 1924, the previous peak year, according to the Textile Division of the Commerce Department. Based on approximate deliveries of raw silk to the mills consumption amounted in 1925 to 501,000 bales, an increase of 37% over 1924. Imports from Japan accounted for 78% of the total.

Japan's Ray Silk Exports

WASHINGTON, D. C.—Raw silk with a value of $38,800,000 led all other exports of Japan to the United States during the month of December, 1925, with an increase in value over the exports for the preceding month of more than $4,000,000, according to a cabled report to the Department of Commerce from Acting Commercial Attache, A. B. Calder, Tokyo. Waste silk and textiles, the second item in importance among the shipments, also recorded an increase during the month, exports totaling $1,713,000 as against $1,580,000 in November.

THE phenomenal growth of *scientifically weighted silk,* in comparison with non-weighted, has far surpassed all expectation or prediction.

We do not, and will not, weight fabrics in a manner inconsistent with their fundamental structure, thereby presenting a creation which will bear the test of technical criticism and satisfy the most exacting consumer demand.

Our foresight, supplemented by the experience of a decade, has made fabrics processed by us the standard of the trade.

Our trade mark upon the finished piece carries a definite assurance of Quality and Service.

"The Hallmark of Quality"

United Piece Dye Works

DYERS, PRINTERS, FINISHERS OF TEXTILE FABRICS IN THE PIECE

SCIENTIFIC WEIGHTING - - SKEIN DYEING

LODI - - NEW JERSEY

New York Office: 132 MADISON AVENUE

Mills.

LODI, HAWTHORNE, PATERSON, N. J., *and* ALLENTOWN, PA.

STAFFORD

STAFFORD Automatic Looms can be supplied with either shuttle or bobbin-changing automatic features. They increase production, cut costs in half and frequently more, and produce a quality of fabric unsurpassed.

The Stafford Company
Weaving Machinery
READVILLE, MASS.

Southern Agent:
FRED H. WHITE, Charlotte, N. C.

Four reasons why you should

Standardize on Shambow Shuttles

1. SUPERIOR QUALITY
2. PROMPT DELIVERY
3. INTELLIGENT SERVICE
4. ATTRACTIVE PRICES

After you have given Shambow Shuttles a thorough test you will never change to another make of shuttle.

You can make the test at our expense—ask us how!

SHAMBOW SHUTTLE CO., *Woonsocket, R. I.*

Warehouses and Salesrooms at
GREENVILLE, S. C.; PATERSON, N. J.

COTTON GOODS MARKETS

Smaller Volume as Jobbers Leave Town

Gray Goods Quiet but Firm—Good Aggregate of Small Orders on Finished Goods

Trading in gray goods has not been as active this week as it was during several recent weeks, but prices have held firm on the whole. Percales and novelty prints of a considerable range continue to feature the movement in colored goods, and another big fancy print season seems certain. Buying of staple colored goods continues to be described as satisfactory. Wash goods business is still light.

The outstanding feature of the business so far this year has been, of course, the conservatism of all classes of buyers. Plunging has been distinctly absent in all divisions of the market. With few exceptions orders have been confined to deliveries within the first quarter of the year, the impression being general that the current price basis is a safe one on which to operate for that far, at least.

Jobbers' Stocks Small

In view of this conservatism the volume of relatively small orders that have been placed on staple finished goods of many descriptions is especially interesting. It indicates that there has not been much exaggeration of the condition of buyers' stocks, and that a steady stream of similar orders may be expected for some time to come, in the absence of unexpected developments. There has been considerable anticipation of deliveries, and requests for express shipments of orders recently placed.

Flannels for fall are moving in a fair way at prices averaging about 15% lower than those named a year ago. Denim business is said to be sufficient to take care of operations for approximately two months ahead in important quarters. In this as well as other divisions of the colored goods business production has been adjusted to demand with sufficient completeness to make the outlook decidedly better.

Gingham Improvement

From all sides come reports of a gradual improvement in the status of ginghams. Restriction of production has been the most important contributor to this condition, of course, but jobbers in various sections of the country say that demand appears to be reviving from consumers. New prices made on staples are very attractive, and should help considerably in the development of an upward swing. It is declared that stocks have been well cleaned up.

Comparative Quotations

	Jan. 27	Jan. 20	Jan. 28, 1925
Spot Cotton, New York	20.90¢	21.05¢	23.90¢
Print Cloths:			
27- in., 64x60, 7.60 yd.	6–6⅛¢	6–6⅛¢	6¾–6⅞¢
38½-in., 64x60, 5.35 yd.	8½–8¾¢	8⅝–8¾¢	9⅛¢
39- in., 68x72, 4.75 yd.	10–10⅜¢	10–10⅜¢	10¾¢
39- in., 72x76, 4.25 yd.	11¼¢	11¼¢	12⅛–12¼¢
39- in., 80x80, 4.00 yd.	12¼–12½¢	12¼–12½¢	13½–13⅝¢
Brown Sheetings:			
36- in., 56x60, 4 yd.	9⅞–10¢	9⅞–10¢	10⅞–11¢
36- in., 48x48, 3 yd.	11⅝–11¾¢	11⅝–11¾¢	13½–13¾¢
37- in., 48x48, 4 yd.	9⅜¢	9⅜¢	10¼–10⅜¢
Pajama Checks:			
36½-in., 72x80, 4.70 yd.	10⅜–10¾¢	10⅜–10⅝¢	10¾¢
36½-in., 64x60, 5.75 yd.	8⅜–8⅝¢	8⅜–8¾¢	8⅞¢
Drills, 37-in., 3 yd.	12–12¼¢	12–12¼¢	13½¢
Denims, 2.20s	17½¢	17½¢	*18¾–19¢
Tickings, 8 oz.	21¾¢	21¾¢	24½¢
Standard Prints	9½¢	9½¢	9¼¢
Eastern staple ginghams, 27-in.	9¢	9¢	10½¢

* Nominal.

Cotton Goods Notes

Wash goods continue a puzzle to sellers as well as to buyers. No one appears to know just which way the cat is going to jump, and as a consequence there has been little real volume placed so far. Rayon mixtures of the alpaca type still stand out, and there is not much question that this will be another big year for prints, but just what kind of prints is something else again.

* * *

Converters in close touch with the broadsilk market declare that there are large stocks of 54-in. goods in manufacturers' hands which are not proving the easiest thing in the world to move. They say that the silk industry let its enthusiasm run away with it on 54-in. goods, and has increased production on wide widths to an extent which will make absorption of production difficult if straight lines in women's dress go out as rapidly as predicted. Those in the cotton goods market who have been preaching conservatism on 54-in. goods stick to the position that they have been established and will show consistent growth, but that radical increases in production now will prove embarrassing.

* * *

In several quarters bleached goods business during recent weeks is described as steadier and aggregating healthier volume than anything that has been done during the last six months.

* * *

It is a little too early, of course, to talk about a gingham "revival," but good students profess to see the beginnings of a swing back to normal consumption of staple and semi-staple fabrics of a gingham nature.

* * *

Maintenance of the present healthy print cloth market situation is primarily dependent upon sensible production schedules, but it is fair to say that the increase in southern production which has taken place since the elimination of the drouth factor seems to have been absorbed without any difficulty.

FALL RIVER, MASS. Attorney Arthur S. Phillips has petitioned the superior court of Bristol county in behalf of George H. Waring for the appointment of a receiver of the Conanicut Mills. Mr. Waring owns a controlling interest in the mill which has been closed under an attachment for some time.

MANCHESTER NEWS BY CABLE

Manchester, Eng., Jan. 27 (Special Cable to TEXTILE WORLD).—Yarn and cloth quotations remain much firmer. All producers are not obtaining relief, but certain sections are doing much better. Numerous buyers are convinced that more favorable opportunities of purchasing will not exist in near future. Big cloth inquiry and substantial.

Sales for India in light goods and bleached shirtings. Bleachers busier than for long time back. Offers in gray shirtings improving and more transactions arranged. Cloth auctions in China continue satisfactory. More fresh business for Shanghai in grays and whites.

Only occasional sales for Egypt. Printing and finishing qualities moving off more freely for South America. Index number for week is 168.

British Cotton Exports Lose 10,214,200 Yds. and £2,922,046 in 1925

MANCHESTER, ENG., JAN. 13.—The December 1925 exports of cotton yarns and manufactures from the United Kingdom amounted to £15,802,515 and the total of manufactured articles to £51,790,074, compared with £14,019,211 and £48,073,071 in November, and £17,961,254 and £52,918,714 in December 1924.

Shipments of cotton piece goods in December, 1925 totalled £11,985,410 representing 382,184,700 square yards, compared with £10,465,960 and 325,912,100 square yards in November, and £14,074,008 and 409,566,400 square yards in December, 1924. The exports for the twelve months ended December, 1925, were £150,526,060 and 4,433,745,300 square yards, the comparative figures for 1924 being £153,448,106 and 4,443,959,500 square yards.

During December 1925 the value of cotton yarns sent abroad was £2,514,149 ,and the weight 17,947,100 lb., whereas in November the figures were £2,134,053 and 13,908,400 lb., and in December 1924, £2,365,542 and 13,525,700 lb. For the twelve months ended December 1925 the exports were £30,500,647 and 189,532,100 lb., against compartive figures of £27,782,126 and 163,056,400 lb. for 1924.

Starts Second Term of Textile Course at Columbia

The second term of the Columbia University course in cotton goods manufacturing conducted by James W. Cox, Jr., consulting textile engineer, will commence Friday, Feb. 5, at 7:30 P. M., in Room 306, Engineering Building, Columbia University, New York City.

This course being a year's course, students can only be accepted at this time who have taken Mr. Cox's previous course, or have had the equivalent in training somewhere else. Mr. Cox is located at 320 Broadway, New York City.

Gain of 13% in Cotton Cloth Exports During 1925

WASHINGTON, D. C.—Exports of cotton cloth from the United States increased 13% over 1924 shipments, the total amounting to 543,000,000 sq. yds., as compared to 478,000,000 in the preceding year, the Textile Division of the Department of Commerce reports. The largest gains were in unbleached cloth which increased to 129,000,000 sq. yds. from 111,000,000. Printed cloths also made a gain from 97,000,00 to 111,000,000 sq. yds.

Fancy Half Hose

B–Vertical Floating Striping Machine.
B–Vertical Floating Striper and Dot Machine.
*** B–6 Machine.**
*** B–7 Machine.**

These machines offer a variety of styles and colors to meet all demands.
Simple patterns may be produced on these machines as well as the more comprehensive styles containing a multiplicity of colors, checks, dots, etc., incorporating in one machine the advantages of all these desirable features.

*** Models B–6 and B–7.**

These machines are built with six and seven yarn feeding fingers, respectively. These machines are of floating vertical stripe design.
The vertical stripes are produced by groups of knitting needles knitting with one or two yarns used for plaiting, thus producing a perfectly clear and positive vertical stripe of a greater width than can be produced with reverse plaiting needles, particularly when using worsteds or soft yarns on coarser gauges.
The vertical stripes can be located throughout the circumference of the stocking as desired, by the use of jacks under the needles to produce the vertical stripe of the width desired.
These machines will produce repeated horizontal stripe patterns of any design up to 48 courses, if two or more course width stripes are desired. Repeated patterns up to 24 courses can be made if single course stripes are incorporated in the pattern.
The vertical striping attachment on these machines is so arranged that when making plaids or checked patterns small squares can be inserted in the middle of the check or vertical stripe.
The above machines can be set up for either men's half hose or ladies' hose, if desired.

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SCOTT & WILLIAMS

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KNIT GOODS MARKETS

Volume Placed on Hosiery Disappoints

Jobbers Still Ultra-Conservative Because of Raw Material and Style Uncertainties

Business placed on hosiery by jobbers during their visits to the New York market has been disappointing in volume. Many out of towners are still around the market, it is true, and it is a fair assumption that they will leave behind them something in the way of definite orders, but the high tide of the movement has passed. Important operators have returned to their home cities.

In some ways it is easy to summarize the reasons for the comparatively light buying that has been done on both spring and fall goods. Jobbers are firmly wedded to close buying policies. In addition, they are playing the game with exaggerated caution because of what they consider uncertainties in all raw materials, and because of acknowledged uncertainties in styles of fancy half hose.

Raw Material Angles

In connection with the raw cotton situation it is pretty much a waste of breath to talk to jobbers about the premiums that must be paid for good staples, the strength of the yarn market, the large percentage of untenderable cotton in this year's crop, etc. They look at the cold figures of spot cotton quoted in New York at approximately 21c and October quoted at approximately 18c—and decide to hold down their commitments on cotton goods as much as possible.

Silk is not so easy. The broadsilk industry had a record year in 1925, however, it cannot maintain its present rate of activity indefinitely, prices on the raw material are high and are coming down sooner or later, reasons the jobber.

In rayon, from the raw material standpoint, the buyer seems to be a little off in his reasoning. Everyone recognizes that the long-time trend of prices for the fibre will be downward, but there is practically no possibility of a reduction until the third quarter of the year, and no one is asking jobbers to buy fibre hosiery for fall just yet.

Pessimism Unwarranted

All of the above does not mean, of course, that fair sized orders have not been placed during recent weeks. It means that, as a general rule, business placed has not been up to expectations, expectations which were perhaps a little too high. It probably means that jobbers will persist in close buying policies, and will wait until the last minute, or nearly the last minute, before getting their detailed orders in for the remainder of spring requirements.

It certainly does not mean that there is any reason for pessimism regarding the outlook for the spring season.

Hosiery Notes

Victor P. Sahner has been appointed selling agent for Severin Bros., Inc., Torrington, Conn., manufacturers of men's worsted half hose, plains and fancies, and of golf hose.

* * *

Buying of wool goods for fall has been relatively light, because of major reasons previously outlined in these columns. The number of lines of fancy half hose on the market has increased materially, and the variety of patterns shown is little short of bewildering. Buyers have followed the policy of placing comparatively small orders on patterns which strike their fancy.

* * *

Fair business on women's all-rayon goods is reported in sections, with a number of mills comfortably situated for the next two or three months.

* * *

According to a selling agent who knows a good deal about his subject, mills are not cashing in fully on the potential market which exists in this country for good quality seven-eighths goods containing a large percentage of wool. The same situation exists, he claims, in the wool mixture field for fancy infant's socks.

* * *

Reports that the much-discussed hosiery buying combination of a number of jobbers will go through are received with skepticism in sections of the New York selling market. The skeptics point out that this scheme has been in the making for a long time, and that nothing has come of it hitherto, notwithstanding that on one or two previous occasions it has been rumored that the promoter was ready to shoot. It will be recalled that the plan includes cooperative buying through one New York office by the jobbers who go into the scheme, the launching of a new brand or brands to be the exclusive property of members of the combination, and possible national publicity for these brands.

* * *

Henry J. List has been elected treasurer and director of the Joel Baily Davis Co., Philadelphia, wholesalers of hosiery and underwear, to succeed the late Milton E. Ulmer. Mr. List has been with the company for more than 38 years.

Hosiery Buying Combination Going Through?

Reports current this week in well informed circles in the New York market were to the effect that there is an excellent chance of the successful consummation in the near future of the hosiery buying combination which has been rumored as under way for some time.

This combination is understood to be the one sponsored by a Cincinnati jobbing house, or rather by a member of the firm of this house. The general outline of the plan has been published in these columns.

The scheme is entirely apart from the merger of wholesalers in the Middle West which has been so much talked about during the last few months; it contemplates cooperative buying of hosiery only by a group of wholesalers.

* * *

Conference on Government Underwear Specifications

A conference on new specifications for Government-purchased underwear was held in Washington on Monday between members of the subcommittee on specifications of the Associated Knit Underwear Manufacturers of America and the subcommittee on underwear of the Technical Committee for Non-Military Wearing Apparel, Federal Specifications Board. The meeting was understood to have discussion adoption by the Government of the standard sizes recently promulgated by the Association, but no announcement was made as to definite conclusions.

Those present included: J. T. Brownlee, of the Appalachian Mills Co., E. A. Clements, of the Globe Knitting Works, Roy A. Cheney secretary of the association, and Government officials from the Navy, Army, Marine Corps and civilian departments.

Group Insurance in Hosiery Plant

NEWARK, N. J.—Employes of Thieme Brothers Co., hosiery manufacturers of Ft. Wayne, Ind., have joined with the executives of that company in an arrangement for group life insurance protection. There are 311 workers and each is to be insured for $1,000. The policy was placed with the Prudential Insurance Co. by J. J. Kiser, special agent for that company.

This protection is of the so-called contributory type, with the workers themselves paying a part of the premiums and the company assuming the remainder of the cost. No medical examination was required because of the large number of persons involved.

Cut Price Rumors in Underwear Market

Jobbers Say They Have Obtained Concessions on Heavy-Weights in a Number of Sections

Rumors of "inside" prices, concessions, etc. on heavy-weight underwear for fall continue to flood the New York market. In all cases it is impossible to track any of these reports down, and to receive the admission from any selling office that it has been offering any special inducements to buyers.

Where there is so much smoke, however, there must be at least a little fire. It seems fairly well established now that certain jobbing buyers, if not the general rank and file, have been able to obtain heavy-weights at less than list prices in sections of the market.

Every mill representative in the business has heard these reports from practically every jobber with whom he has talked. There can be no doubt that the jobber has made the most of whatever weakness has been displayed, and some exaggeration has undoubtedly been indulged in by him in reporting his conquests. One or two of the stories which are rather common gossip in the market are not sufficiently definite to make their publication advisable.

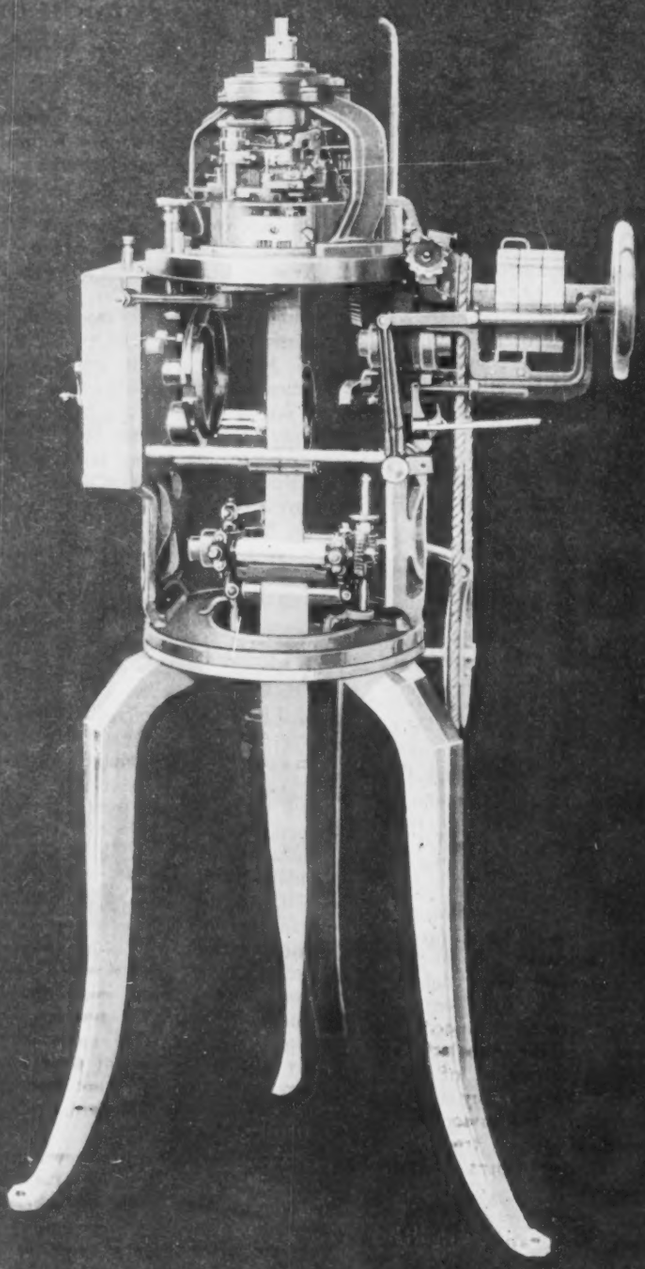
It is a noteworthy fact that in many of the tales regarding cut prices names of mills are not mentioned. It may be assumed that in most cases those implicated are among the smaller producers. Representatives of large manufacturers say that to the best of their knowledge concessions have not been given on any of the standard, well established lines.

Reports are heard, however, to the effect that one or two of the larger southern mills have taken enough business on men's heavy-weight ribs at the first delivery price to run their mills well into June or July.

An Unfortunate Situation

It is unfortunate, of course, that this situation should have developed. The net result has been to undermine buyers' confidence in all quotations, and many of them have left the market after placing nothing but light orders. With all the rumors that have been flying around it is hardly possible to blame the jobber for not knowing whether or not he was getting the rock-bottom price.

Close students of the underwear business are emphatic in declaring that there was absolutely no necessity for the price situation which has apparently been created. They feel that the heavy-weight business was



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WILDMAN
has increased
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We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

WILDMAN
CIRCULAR RIBBER

Knit Goods Markets—Continued

shaping up for one of the most satisfactory seasons it has ever known, and that heavier volume would have come in if all manufacturers had stuck firmly to their guns.

It is reported that on one line which possesses a well deserved reputation for holding firm to its list prices business on men's heavy-weight ribs placed thus far is approximately 20% in excess of that which was on the books at this time a year ago.

Underwear Notes

"Whadyeknow" whispered one jobber this week, " I haven't paid the list price for any goods I've bought in the last ten days." This is fairly typical of the sort of thing which is going the rounds these days.

* * *

Many out-of-town jobbers have gone back to their lairs, but there remained in the market this week a good sprinkling of laggards who were still sizing things up. Representatives of the southern trade are expected to be in New York in fair numbers during the next two weeks.

* * *

Developments in the light-weight business continue thoroughly satisfactory, according to representative sellers. Important mills have been running full on light-weight ribs since last June, and there is every indication that they will keep steadily busy right through the spring. Orders have not been individually large, as a general rule, but they have kept coming in steadily. A spokesman for one of the best known mills in the country said this week that this season will be as good a one, from all angles, as they have had in many years.

* * *

Balbriggan improvement has been gradual but consistent. Selling agents for low-end mills report a steady stream of duplicate orders.

* * *

In this connection it is interesting to record that fair duplicates are coming in on the rayon-striped bals, both the whites and the colors. The selling agent of a mill which made its first offering of these rayon-striped bals last summer reports a typical example of a jobber in the Northwest who had no enthusiasm for these goods when they were first shown to him, but agreed to take a line of samples to his retail trade. About a month later he ordered 12 dozen striped goods, and recently he sent in his order for 72 dozen.

* * *

The New York representative for a mill which has been turning out rayon-striped bals for several seasons makes no bones about saying that the whites are now firmly established as a market staple, in his opinion.

* * *

The Oneita Knitting Mills, Utica, N. Y. are offering a men's all-rayon knitted athletic union suit.

Sweaters Still Draggy in a Quiet Market

Reduction of $1.50 on One Worsted-Plaited Coat—Style Trends Uncertain

Aside from fair orders for novelties for comparatively nearby deliveries the market situation of practically all kinds of knitted outerwear continues dull and uninteresting. Business on staple sweaters this month has been decidedly not up to expectations, and jobbers as a class still hesitate about making sizable commitments on fall goods of any kind.

The recent cut of $1.50 in the price of a well known staple worsted plaited sweater coat is an example of the unsatisfactory state of affairs which exists on staple goods. Rumors of price concessions here and there in the market have been circulating for some time, attempts to encourage business by granting "inside" prices have been freely whispered about, but this is the first reduction of moment which has been definitely tracked down.

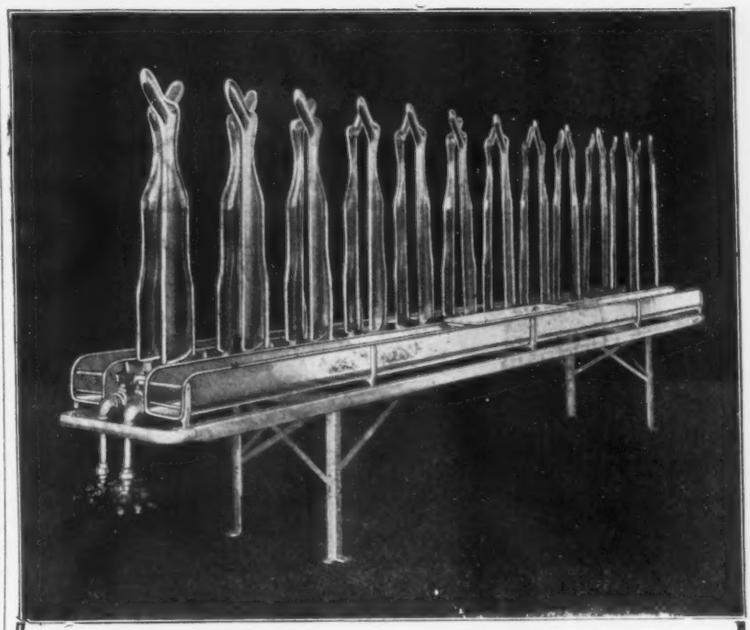
A few mill representatives seem more or less resigned to the probability that the situation on fall goods generally will drag along, with gradual improvement as style trends become more clearly defined. Meanwhile, all indications point to good business on novelty windbreakers and crickets for spring.

Marine Corps Asks for Textile Items

Bids for supplying 96,000 pairs of natural white cotton and 104,000 pairs of woolen socks for the Marine Corps, will be opened at the Philadelphia Depot, Broad St. and Washington Ave., Feb. 16. On Feb. 19, bids will be opened at this depot for supplying the Marine Corps with 20,000 yds., 16 oz., green kersey, 300 yds., of 30 oz. green beaver and 500 yds. of black mohair serge lining.

Canada's Cotton Imports

WASHINGTON, D. C.—During the twelve months ended Nov. 30, 1925, Canada's imports of raw cotton from the United States were 30% larger than during the similar preceding yearly period, and present activity in the textile industry bids fair to continue during the next few months, according to the Textile Division of the Department of Commerce. The annual consumption averages around 200,000 bales. Canadian statistics for the seven months ended Oct. 31, 1925, show increased imports of American cotton yarn and of dyed, printed and unbleached fabrics; also of hosiery, both cotton and silk. Important items in the textile group are binder twine and cotton bags, both of which made very noteworthy gains in their 1925 imports and should maintain them in 1926 if agricultural conditions are as satisfactory.



Paramount Progress

The increasing number of Paramount Users establishes more firmly than ever before, the Superiority and Efficiency of the PARAMOUNT METHOD for correct hosiery drying and finishing. One of the important factors in determining Paramount Supremacy is the constant improvement of Paramount Equipment to more effectively fill the requirements of discriminating hosiery manufacturers.

We are now in a position to furnish on either a sale or rental basis, the NEW PARAMOUNT ALL-METAL TABLE with ANGLE-BASE ATTACHMENTS, plus an improved and different principle in Low Pressure Steam operation.

This NEW TABLE is made entirely of metal and the troughs are constructed from smooth, highly-polished aluminum. Aluminum is non-absorbent and tarnish-proof, which permits changing from colored to bleached goods by simply wiping out the troughs. All edges are rounded and there are no corners or pockets to collect dirt. The possibility of THREAD PULLING is positively eliminated.

The ANGLE-BASE ATTACHMENT allows the operative to see both sides of the stocking without moving the form. It facilitates and simplifies both boarding and stripping and promotes Quality Work.

The new Circulating System provides for uniform heating at all times, with unusually low steam pressure.

Upon request, we will be pleased to furnish further particulars.

PARAMOUNT TEXTILE MACHINERY CO.

Hunter Building

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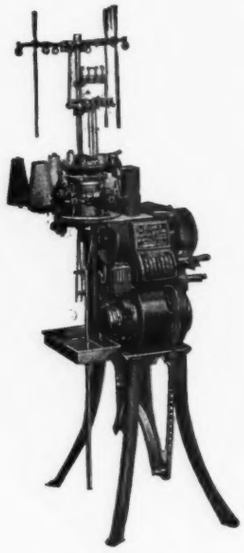
SPLIT FOOT

Half-Hose Product Illustrating Distinguishing Features

FULL SILK OR COMBINATION SILK BOOT & INSTEP
NO FRINGE TO PULL THROUGH
MERCERIZED DOUBLE ADVANCED TOE
MERCERIZED SILK OR COMBINATION SILK
NO HARD SEAMS
FULL MERCERIZED DOUBLE HEEL, SOLE & TOE

ARE THESE FEATURES *INCORPORATED* IN YOUR HOSIERY?

Exclusive feature eliminating all unsightly double sole fringe protruding through the stocking.



SPLIT-FOOT MACHINE

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OBITUARY

William A. Hedden

William Ayers Hedden, founder of the New Albany (Ind.) Hosiery Mills, died last week in New Albany following several operations for intestinal trouble. Mr. Hedden was 79 years old, and retired from business more than a year ago, when operations at his hosiery plant were discontinued. Early in his business career he was manager of the New Albany Woolen Mills, which is also now out of existence. He was born in New Albany and lived there all his life, having been active in many civic enterprises.

Hudson W. Hakes

Hudson W. Hakes, founder of the H. W. Hakes Mfg. Co., Millbury, Mass., now a branch of the J. H. Williams Co., of that town, manufacturers of shuttles, wire heddles and heddle frames, and who was general manager of the latter company until his retirement from active business about 10 years ago, died at his home in that town on Jan. 18, after a long illness, at the age of 73 years. He was inventor of many improvements and attachments for shuttles, which were used to great advantage by his company. Mr. Hakes was a native of Millbury and passed his life there.

John J. Hayes

John J. Hayes, retired knit goods manufacturer of Amsterdam, N. Y., died in that city on Jan. 23 after an extended illness. He was 70 years old. He was born in Philmont, N. Y., where he learned the knitting trade with the Akin Knitting Mills. Going to Amsterdam in 1892 he assumed the superintendency of the Nelson Knitting Mill which he held for some time. During the later years of his life he conducted a knit goods plant at Amsterdam.

Edmund Emsley

Edmund Emsley, inspector in the weaving department of the Riverside Mills, of the American Woolen Co., Providence, R. I., who died at his home in Pawtucket, R. I., on Jan. 24, was the father of Howard A. Emsley, superintendent of the Wuksanut Mills, Inc., Farnumsville, Mass. The elder Mr. Emsley was a native of England, 70 years old and had been employed by the Riverside Mills for the last 20 years.

Otis Hamlett

Otis Hamlett, aged 33, foreman of the twister room at the Roxboro (N. C.) Cotton Mills, died suddenly Wednesday at the noon hour. He was near the elevator shaft in the mill talking to one of the overseers when he was seen to gasp and died before medical assistance could be obtained.

Charles Taylor

Charles Taylor, whose death was reported last week was president of the Taylor-Lockwood Co., Cleveland, Ohio, reclaimers of wool, in addition to being president of the Cleveland Woolen Mills Co., Dresden, Ohio.

Mr. Taylor was born in England in 1854. In the year 1879 he left England for this country and worked for some little time in Chicago.

In the year 1881 he came to the City of Cleveland and worked for the Muhlhauser Co. who at that time were the leading shoddy manufacturers in this country.

In the year 1887 Mr. Taylor with George E. Collings and several others formed a partnership under the name of Collings, Taylor & Co., for the manufacture of shoddy.

In the year 1899 the partnership was dissolved and a corporation was formed under the name of The Collings-Taylor Co. which was continued until a few years ago when it was changed to The Taylor-Lockwood Co. During the entire 38 years the company has been in existence Mr. Taylor took a very active part in its affairs.

About 10 or 12 years ago he with others formed a company under the name of The Cleveland Woolen Mills Co. at Dresden, Ohio, of which he has been the leading factor since the organization was formed.

George E. Templeton

George E. Templeton, manager of the Brook Woolen Co., Simcoe, Ontario, died in that town recently. Mr. Templeton had charge of textile plants in Cobourg, London, Toronto, and Kingston, before going to Simcoe to take charge of the Brook Woolen Co.'s plant. In the early part of the war he supervised the dyeing of khaki cloth used for uniforms for the Canadian army. He was 38 years of age and died as result of an accident in Montreal.

Emsley Greenwood

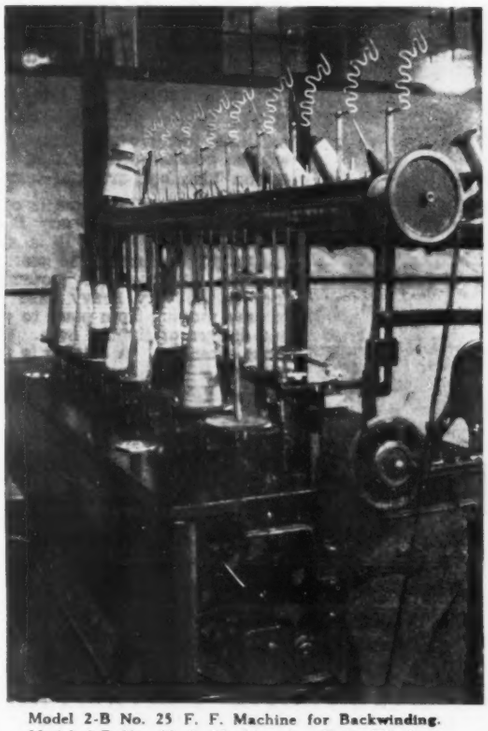
Emsley Greenwood, an overseer for the Terry Mfg. Co., Inc., Worcester, Mass., died suddenly at his home in that city on Jan. 21, aged 58 years. He was a native of Bradford, Yorkshire, England, and had been a resident of Worcester nearly 20 years, first beginning as a twister for the Queensbury Mills. He was president of the English Social Club of Worcester for the last four years. He leaves a widow and a daughter, Mrs. W. J. Maylott.

John E. O'Connell

John E. O'Connell, formerly with the Dwight Mfg. Co., of Chicopee, Mass., and credited with numerous inventions for the improvement of cotton mill machinery, died in his home in Springfield, Mass Jan. 13.

Correction

In an obituary notice last week of the late J. E. Lent of Pawtucket, R. I. he was mentioned as the agent for the Manville-Jenckes Co. He was, however, associated with the Jenks Knitting Machine Co. and not the Manville-Jenckes Co.



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See pages 218-9 of the Consolidated Textile Catalogs

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FINANCIAL MARKETS

Large Sales of Textile Shares

Bulk of Auction Offerings Absorbed but in Many Cases at Declines

BOSTON, Jan. 27.—Offerings of textile shares at today's auctions were in excess of those for any week in December when loss taking sales for tax purposes were in progress, and have seldom been exceeded. In many instances they represented the efforts of tired holders to unload, and they demonstrated that there is still a market for textile securities at a price, and it is a matter of surprise that declines were not much greater in view of the recent slow demand. In few instances were values lower than those that have been touched recently in private trading, and in the case of Fall River stocks they were about on a parity with recent bid prices in that market, and in some instances higher.

Undoubtedly much of the selling was precipitated by the disappointing character of certain mill statements made public recently, and by failure of the goods market to show as substantial improvement since the first of the year as had been anticipated in some quarters. It should be noted in this connection, however, that the goods market has shown some improvement both in volume and in prices, and it should also be noted that there has been a very decided improvement in both cotton and worsted business since the largest part of the losses displayed in mill statements recently made public were incurred. It is a buyers' market, and the larger is the volume of distress offerings and the decline in values the sooner will an active demand and an advancing market develop.

The most striking feature of the transactions in listed textiles on the local exchange during the week has been the continued active selling of Pacific and the almost steady decline in the value of this stock; as previously noted it is based upon anticipated passing of dividend at next week's meeting as the result of expected failure of the company to show dividends earned. The low point touched by the stock earlier in the week and again today was 42, the closing sale today being at 43, or a net loss for the week of 5½ points. American Woolen touched a low of 86 during the week and closed today at 87, or a net gain of ½ point; the common stock has sold as low as 38, and at its closing today of 38¾ showed a net loss for the week of ½ point. Amoskeag common has sold within a range of 65½ to 64¾, and at the latter closing price today showed a net loss for the week of ¼ point; the preferred sold with dividend on as high as 76¼ and closed today ex-dividend at 73½. Bigelow-Hartford common shows a net advance for the week of 1 point at 98. A few sales of New England Southern preferred were made at 25 and of the common at 4¼, both prices being unchanged.

Indian Head Mills Loss

Further proof that southern as well as northern cotton mills suffered from poor business last year is shown by the balance sheet of Indian Head Mills, Cordova, Ala., a subsidiary of Nashua Mfg. Co., which showed a loss for the fiscal year ended October 31 after all charges of approximately $65,620, as compared with a profit of a few thousand dollars the previous year. It is interesting in this connection to note that working capital of Indian Head Mills, which amounted to $633,805, when added to net quick assets of the Nashua plant, gives the Nashua Mfg. Co., net quick that falls but $350,573 below the 110% requirement on preferred stock before dividends on the company's common stock can be resumed. No dividends have been paid on the latter since 1921.

No Action at Hamilton Meeting

The special meeting of stockholders of the Hamilton Mfg. Co., cotton goods, Lowell, Mass., held on Thursday of last week adjourned without taking other definite action than to discharge the special stockholders committee headed by Eliot Wadsworth. Previous reports of failure to secure a firm bid for the property and to effect reorganization were confirmed. President Felix Rackemann doubted whether any further meetings would be held and expressed the opinion that the banks would shortly take over the property. Treasurer F. C. Dumaine, Jr., presented the following comparative balance sheet as of Jan. 1, 1926 and Aug. 1, 1925:

	January 1, 1926	August 1, 1925
Cash and debts receivable	$1,224,552	$999,277
Inventories	536,203	1,026,356
Total debits	2,441,286	2,606,320
Total deficit	790,838	560,678
Cotton and waste in bales	1,867	1,479
Stocks in process in yards	701,289	609,471
Finished stocks in yards	3,704,676	1,570,518

Monomac Passes Dividend

The Monomac Spinning Co., worsted yarns, Lawrence, Mass., showed a net loss after all charges for the fiscal year ended Dec. 31 of approximately $175,000, and for the first time since the inauguration of dividends by the company in 1915 the directors voted to pass the current quarterly dividend. As stated by Treasurer E. N. Hood "the tremendous drop in wool values at the beginning of the year proved a handicap that could not be overcome." There was an inventory valuation shrinkage of $1,334,000 that was largely offset by decrease in accounts and bills payable of $1,113,000. Although surplus decreased $403,000 and net quick $416,000, net quick assets remain well in excess of $2,000,000. This company's capital of $5,000,000 is double what it was in 1920 when a 100% stock dividend was distributed.

Arlington's Disappointing Showing

The financial statement of the Arlington Mills, worsted manufacturers, Lawrence, Mass., for the fiscal year ended Nov. 30, 1925, shows a net loss after all charges of $96,089 and a deficit, after regular dividends of $960,000, of $1,056,089, as compared with a deficit the previous year of $156,208. Net current assets as of Nov. 30 aggregated $8,606,281, as compared with $9,508,180 the year before. Reserves show an increase of $542,101, making the net decrease in surplus and reserves only $513,087. The company's income statement as of Nov. 30 for the last two years compares as follows:

	1925	1924
Total sales	$15,704,868	$15,411,782
Earnings	490,662	1,422,610
Deductions	586,752	628,818
Dividends	960,000	960,000
Surplus	*1,056,089	*156,208

*Deficit.

Naumkeag Adds to Surplus

As the Naumkeag Steam Cotton Co., Salem, Mass., added to its surplus $134,984 for the fiscal year ended Nov. 28, 1925, after payment of $720,000, or 12% in dividends on its $6,000,000 capital, it indicates a net income after all charges, excepting federal taxes, of $854,084, or $14.25 a share; this compares with $974,000, or $16.23 a share in 1924. It is understood that fully two-thirds of the 1925 profits were made during the first six months of the year, the decline in prices during the last half of the year resulting in a much narrower profit. Among the most striking features of the company's statement is an increase of more than $1,000,000 in value of cotton on hand to $2,380,852, and an increase in notes payable of $700,000, this item on Nov. 28 standing at $1,300,000. It is understood that the company has about 25,000 bales of cotton in store, or enough to cover normal requirements for the balance of the year, and this cotton at today's prices would show a fair profit. As Naumkeag requires even running, hard, white, 1 1/16 cotton for its work, and as Treasurer Simonds has had an almost uncanny way of hitting cotton prices right in the past, it is likely that stockholders will feel comfortable rather than nervous over these features of the company's statement. Naumkeag added substantially to its plant during 1925, which is reflected in an increase of $291,554 in property account. Its mills ran at capacity during 1925, are still running at capacity with plenty of orders ahead, and continue an outstanding example of the possibility of making medium count staple cottons successfully in Massachusetts and New England.

Boston Stock Auctions

The following sales of textile share were made at today's auctions:

Shs	Mill	Par	Price	Change
214	Conanicut	100	18½	
95	Barnard	100	51¼	
20	Corp	100	41½	—2½
17	Arkwright	100	25	— ½
129	Shawmut ex-div	100	110	
24	American Linen	100	20	—5¼
54	Sagamore	100	173–185	—18
7	Lincoln	100	62	
2	Pocasset	100	20	
2	Cornell	100	98	+ 3
50	Foster Spinning	100	161	
5,770	Canadian Cons., class A, com.	100	1⅞	— ⅛
95	U. S. Worsted Corp., 2nd pfd.	100	73⅛	— 2⅞
14	U. S. Worsted Corp., 1st pfd.	100	25	
95	U. S. Worsted Corp., com.	100	4⅜	— 1⅞
4	Lyman ex-div	100	112	— ½
14	Lyman ex-div	100	117	+ 1
65	Hamilton Woolen	100	121½	— ⅞
70	Berkshire	100	151⅛–151⅝	+ ⅞
5	Sharp	100	34	— ½
55	Border City	100	59	+ ⅝
5	Farr Alpaca	100	171	—1¼
75	Pepperell	100	136⅛@137⅛	— ⅞
1	Fairhaven pfd	100	15	— 5
5	Arlington	100	88⅞@89⅛	— 1⅜
80	Brookside	100	89⅜@89⅝	+ ⅞
15	Continental ex-div	100	80	—28½
15	Ludlow Associates	100	176⅞@177⅛	— ⅞
10	Massachusetts	100	70¼	— 6¾
2	West Point	100	156¼	+ 1¼
8	Nat'l Fab. & Finish	100	85	— 10
25	Plymouth Cordage	100	152@150⅝	— ⅝

5,993 Total.

Dividends Declared

Mill	Pd.	Rate	Stk.	Payable	To stock of
Amoskeag	S-A	$2.25	pfd.	Feb. 2	Jan. 20
Conn. Mills	Q	1.75	pfd.	Feb. 1	Jan. 20
Luther	Q	$2.00	com.	Feb. 1	Jan. 19
Lancaster	Q	1¾%	pfd.	Feb. 1	Jan. 27
Esmond	Q	1¾%	pfd.	Feb. 1	Jan. 23
Esmond	Q	1½%	com.	Feb. 1	Jan. 23
Nashawena	Q	2%	com.	Feb. 2	Jan. 26
Harmony	Q	$1.75	pfd.	Feb. 1	Jan. 28
Botany	Q	$1.00	Class A	Feb. 15	Feb. 5

Spartanburg Dividends

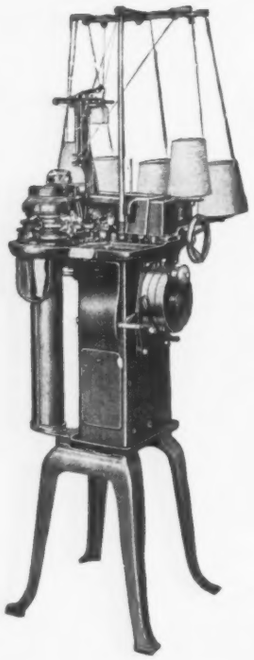
SPARTANBURG, S. C.—The semi-annual dividend disbursements, Spartanburg county mills, as reported by A. M. Law Co., are as follows:

MILLS	Dividend Percent rate	Stock		Dividend
Arcadia Mills	5	$200,000.00	Com.	$10,000.00
Arcadia Mills	3½	800,000.00	Pref.	28,000.00
Beaumont Mfg. Co.	5	200,000.00	Com.	10,000.00
Beaumont Mfg. Co.	3½	200,000.00	7% Pref.	7,000.00
Beaumont Mfg. Co.	3	200,000.00	6% Pref.	6,000.00
D. E. Converse Co.	3½	1,000,000.00	Com.	35,000.00
Chesnee Mills	5	394,900.00	Com.	19,745.00
Clifton Mfg. Co	4	2,500,000.00	Com.	100,000.00
Cowpens Mills	2	400,000.00	Com.	8,000.00
Cowpens Mills	4	100,000.00	Pref.	4,000.00
Drayton Mills	3½	350,000.00	Pref.	12,250.00
Enoree Mills	*1½	365,000.00	Pref.	6,387.50
Fairmont Mfg. Co	5	225,000.00	Com.	11,250.00
Fairmont Mfg. Co	3½	150,000.00	Pref.	5,250.00
Inman Mills	3½	600,000.00	Com.	21,000.00
Jackson Mills	4	345,550.00	Com.	13,822.00
Pacolet Mfg. Co	5	2,000,000.00	Com.	100,000.00
Pacolet Mfg. Co	3½	2,000,000.00	Pref.	70,000.00
Saxon Mills	3	900,000.00	Com.	27,000.00
Spartan Mills	4	2,000,000.00	Com.	80,000.00
Woodruff Cotton Mills	5	787,500.00	Com.	39,375.00
				614,079.50

*Quarterly.

The above list of dividends does not include any of those which are paid at other than this period, Inman for example paid 3½% on the preferred Oct. 1. The total would be greatly increased should the pro rata investment of various companies who have plants in Spartanburg County be included. This would include Pacific Mills plant, Victor-Monaghan Co.,

BRINTON KNITTERS



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All parts are accessible from the front or top of the machine. Action of needles and yarn changer easily visible from front of machine. Screw adjustments throughout. Simple and easy transfer. Direct and accessible pattern connections.

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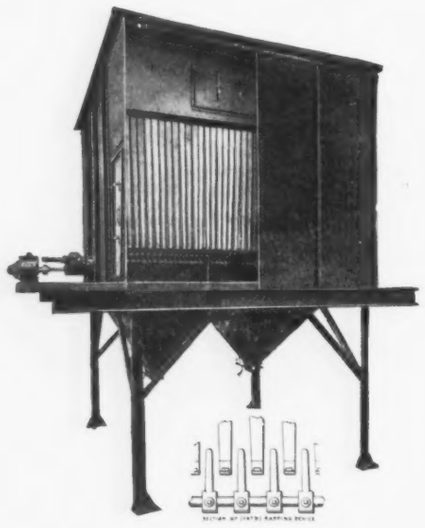

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HONOLULU, H. T., Castle & Cook Building

Financial Markets—Continued

Mills Mill, and other similar units. The dividends have generally been considered satisfactory and represent an increase of more than $30,000 over the dividends paid by Spartanburg County Mills, on July 1, 1925.

New England Textile Stocks

(Quotations based upon last sales at Boston public auction and Boston Stock Exchange.)

	Latest Sales	Prev. Sales
American Woolen, pfd	87	86½
Amoskeag, com.	64¾	65
Androscoggin	125	132
Appleton	†720	760
Arlington	85¼	95
Bates	190¾	196
Bigelow-Hartford, com.	98	97
Boott	†135½	...
Edwards	80	92½
Esmond, pfd.	100½	93½
Everett	41	57
Farr Alpaca	171	182½
Great Falls	18¾	19¾
Hamilton Woolen	52¼	53½
Hamilton Mfg.	1¾	4¾
Hill	25	26
N. E. Southern, pfd	25	25
Ipswich, com.	71	55⅛
Lawrence	39	39¼
Ludlow Associates	175⅛	176
Lyman	112	116¼
Massachusetts	70¼	77
Merrimack	100⅛	98¾
Nashua Mfg. Co., com.	60¼	60
Naumkeag	182¼	182
Newmarket	134	133½
Pacific	43	48½
Pepperell	136⅛	138
Plymouth Cordage	150⅝	150⅛
Tremont & Suffolk	43⅛	108⅞
York	55	77

† Old sale at variance with present bid and asked price.

Fall River Mill Stocks

(Quotations furnished by G. M. Haffords & Co.)

	Bid	Asked
American Linen Co.	...	28
Arkwright Mills	15	25
Barnard Mfg. Co.	...	60
Border City Mfg. Co.	58	62
Borden Mfg. Co., Richard	...	...
Bourne Mills Co.	98	102
Chace Mills	34	40
Charlton Mills	...	125
Cornell Mills	...	...
Davis Mills	...	97
Davol Mills	...	45
Flint Mills	...	100
Granite Mills	...	76
King Philip Mills	130	137½
Laurel Lake Mills (com)	...	15
Lincoln Mfg. Co.	...	75
Luther Mfg. Co.	120	130
Mechanics Mills	40	...
Merchants Mfg. Co.	...	80
Narragansett Mills	...	65
Osborn Mills	...	65
Parker Mills, com.	...	15
Parker Mill* (pfd.)	...	40
Pilgrim Mills (com.)	...	170
Pocasset Mfg. Co.	...	38
Sagamore Mfg. Co.	170	...
Seaconnet Mills	...	5
Shove Mills	...	45
Stafford Mills	40	50
Stevens Mfg. Co.	120	126
Troy C. & W. Mfg.	100	...
Union Cotton Mfg. Co.	...	114
Wampanoag Mills	40	50
Weetamoe Mills	25	...

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushnet Mills	88	92
Beacon Mfg. Co., com.	125	...
Beacon Mfg. Co., pfd.	...	100
Booth Mfg. Co., com.	120	140
Booth Mfg. Co., pfd.	103	...
Bristol Mfg. Co., pfd.	170	180
Butler Mfg. Co.	115	...
City Mfg. Co.	110	115
Dartmouth Mfg. Co., com.	139	143
Dartmouth Mfg. Co., pfd.	85	...
Fairhaven Mills, pfd.	20	...
Fairhaven Mills, com.	...	10
Gosnold Mfg. Co., com.	...	80
Gosnold Mfg. Co., pfd.	80	85
Grinnell Mfg. Co.	100	105
Hathaway Mfg. Co.	112½	115
Holmes Mfg. Co., com.	100	105
Holmes Mfg. Co., pfd.	92	...
Kilburn Mill	131	136
Manomet Mills	35	37
Nashawena Mills	109	112
Neild Mills	210	220
N. B. Cotton Mills, com.	100	...
N. B. Cotton Mills, pfd.	97½	...
Nonquitt Spinning Co.	55	60
Pemaquid Mills	...	26
Pierce Mills	420	...
Potomska Mills	91	94
Quissett Mills, com.	140	145
Quissett Mills, pfd.	95	...
Sharp Mfg. Co., com.	...	36
Sharp Mfg. Co., pfd.	56	60
Soule Mills	175	190
Taber Mills	...	110
Wamsutta Mills	...	96
Whitman Mills	91	94

* Ex-dividend.

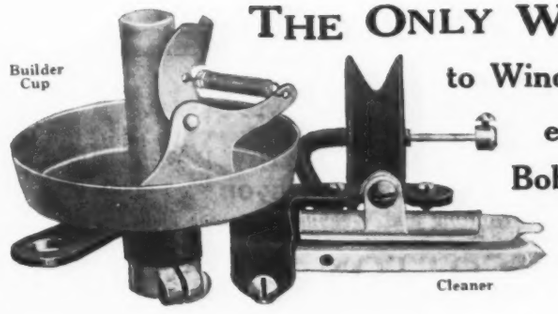
Southern Mill Stocks

Quotations furnished by A. M. Law & Co., Inc., Spartanburg, S. C.

	Bid	Asked
Abbeville Cotton Mills	103	107
American Spinning Co.	240	250
Anderson Cotton Mills	100	105
Arcade Cotton Mills	...	100
Arcadia Mills	245	...
Arcadia Mills, pfd.	102	104
Arkwright Mills	100	110
Augusta Factory, Ga.	20	30
Avondale Mills, Ala.	900	950
Beaumont Mfg. Co.	320	...
Belton Mills	61	64
Belton Mills, Pfd.	97	99
Bibb Mfg. Co.	195	205
Bibb Mfg. Co., 6% pfd.	99	102
Brandon Mills, pfd.	99	101
Calhoun Mills	120	...
Cannon Mfg. Co. (par $10)	16	...
Chadwick Hoskins Co. (par $15)	15	17
Chesnee Mills	140	145
Chiquola Mfg. Co.	300	305
Chiquola Mfg. Co., pfd.	96	99
Clifton Mfg. Co.	142	145
Clinton Cotton Mills	250	...
Columbus Mfg. Co., Ga.	141	144
Cowpens Mills	63	66
D. E. Converse Co.	109	111
Dallas Mfg. Co., Ala.	130	140
Darlington Mfg. Co.	87	90
Drayton Mills	100	...
Dunean Mills	92	95
Dunean Mills, pfd.	95	97
Eagle & Phenix Mills, Ga.	...	140
Easley Cotton Mills, pfd.	90	92
Enterprise Mfg. Co., Ga.	100	110
Gaffney Mfg. Co.	83	85
Gainesville Cotton Mills, Fla.	180	190
Glenwood Mills	130	...
Gluck Mills	83	87
Graniteville Mfg. Co.	135	...
Greenwood Cotton Mills	400	...
Grendel Mills	250	...
Grendel Mills, pfd. (par $50)	48	50
Hamrick Mills	123	128
Hartsville Cotton Mills	149	160
Inman Mills	145	155
Inman Mills, pfd.	103	...
Jackson Mills	200	...
Judson Mills	200	203
Judson Mills, pfd.	105	107
King, John P. Mfg. Co., Ga.	115	125
Laurens Cotton Mills	150	...
Limestone Cotton Mills	125	130
Marion Mfg. Co., N. C.	140	...
Marlboro Mills	45	48
Mills Mill	280	300
Mollohon Mfg. Co.	102	105
Monarch Mills	132	135
Monarch Mills, pfd.	101	...
Musgrove Cotton Mills	71	76
Newberry Cotton Mills	130	132
Ninety-Six Mills	150	...
Norris Cotton Mills	...	84
Orr Cotton Mills	100	102
Orr Cotton Mills pfd.	97	99
Pacolet Mfg. Co.	209	213
Pacolet Mfg. Co., pfd.	103	106
Panola Cotton Mills, Class A pfd. (par $85)	82	85
Pelham Mills	18	21
Pickens Cotton Mills	120	126
Piedmont Mfg. Co.	137	140
Poe, F. W. Mfg. Co.	111	113
Poinsett Mills	83	86
Riverside Mills (par $12.50)	10	10¼
Riverside and Dan River	185	193
Saxon Mills	84	87
Sibley Mfg. Co., Ga.	60	70
Spartan Mills	140	150
Toxaway Mills (par $25)	32	34
Union-Buffalo Mills	...	55
Union-Buffalo Mills, 1st pfd.	93	94½
Union-Buffalo Mills, 2nd pfd.	51	53
Victor-Monaghan Co.	108	110
Victor-Monaghan Co., pfd.	108	110
Ware Shoals Mfg. Co.	145	150
Watts Mills	...	50
Watts Mills, 1st pfd.	91	94
Watts Mills, 2nd pfd.	120	130
Whitney Mfg. Co.	...	85
Williamston Mills	195	...
Woodruff Cotton Mills	140	145
Woodside Cotton Mills	117	120
Woodside Cotton Mills Co., pfd.	90	92

PHILADELPHIA, PA. Plans have been drawn by A. J. Sauer & Co., architects, for a new manufacturing building to be erected at Kensington Ave., north of Carey St., for the Art Craft Silk Hoisery Mills, Inc., now located at Erie Ave. & Amber St., full-fashioned silk hosiery manufacturers, on which bids are due Feb. 2. Among those submitting estimates are Smith Hardican Co., Conneen Construction Co., Irving Demarest, Robbins Construction Co., and Monaghan & Losse.

RAYON



THE ONLY WAY to Wind an even Bobbin for

Knitting, free of underwinds, is by using the LEVER Cup builder Bottle Bobbin Winder.

RAYON is of constantly varying diameter. The light free turning LEVER Cup takes its motion from the yarn itself, and builds a bobbin without those ridges which hold the yarn and cause plucks in the knitting.

THE LEVER patent non-lift spindle guarantees that the yarn can receive no rubbing and damage. Thousands of knitting machines throughout the world supplied with LEVER bobbins, are daily proving this statement.

THE LEVER patent yarn cleaner causes the yarn to float back and forth across a smooth glass bar. The cutting edge touches the yarn ONLY when taking out the slubs and knots. These cleaners are set at .004 for 150 den., and .007 for 300 den. In this way absolute cleaning is combined with elimination of torn fibers and fuzzy yarn.

OSWALD LEVER CO., INC. PHILADELPHIA

Est. 1880

11th & Cambria Sts. Near No. Phila. Station.

RAYON OF BREDA

Agents in the United States for

HOLLANDSCHE KUNSTZIJDE INDUSTRIE

Quality Rayon

For Knitting and Weaving—*Prompt Delivery*

COTTON YARNS

Sole Agents for

ROSWELL MILLS, Inc.
Roswell, Ga.
Double Carded Natural, Bleached and Dyed Yarns
Knitting and Weaving 16s to 24s
Specialists in High Grade 20/2
For Plush Trade

STANDARD COTTON MILLS
Cedartown, Ga.
Highest Quality Mule Spun Yarns
6s to 20s Cones and Skeins

LAVONIA COTTON MFG. CO.
Lavonia, Ga.
Colored Yarns
for
Knitting and Weaving
10s to 16s

ERNALDSON COTTON MILL CO., Inc.
St. Pauls, N. C.
"Erna" Brand
Quality Knitting Yarns
22s to 30s

PAULSON, LINKROUM & CO.
INC.
52 Leonard Street, N. Y.
PHILADELPHIA
PAWTUCKET
CHICAGO
CHARLOTTE, N. C.

A Standard by Which Thread Yarns Are Judged

Product of

THE PARKDALE MILLS, INC.

This plant spins reverse thread cotton yarns exclusively. Its product is made of the choicest long staple white cotton by skilled operatives on the highest type of modern machinery, especially built for the manufacture of reverse threads. It spins yarns adapted for sewing, looping and seaming purposes, in sizes ranging from 20s to 60s, 2, 3 and 4 ply.

Quotations and samples promptly submitted.

H. A. FLORSHEIM, *General Sales Mgr.*
225 Fifth Avenue New York, N. Y.

Also exclusively representing

GRAY MFG. CO.
FLINT MFG. CO
ARROW MILLS, INC.
ARLINGTON COTTON MILLS
MYRTLE MILLS, INC.
ARKRAY MILLS, INC.

MERCERIZED YARNS

of

The Spinners Processing Co.

Insure perfect knitting because of evenness, weavers' knots, careful winding and workmanship throughout.

Produce evenly dyed and soft finish fabrics as a result of the best and most thorough mercerizing.

Higher in lustre, but not necessarily higher in price.

Inquiries for samples and prices given prompt attention.

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SALES OFFICES:

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CHATTANOOGA: 805 James Bldg.
CHARLOTTE: Johnston Bldg.
BOSTON: 88 Broad St.

Identified With the Mercerization of Cotton Yarns Since 1895

SINGLE

Plaiting Yarns
Exceptional Quality

Splicing Yarns
Remarkable Strength

Reg. U. S. Pat. Off.

FORREST MERCERIZING CO.

Sole Agents
FORREST BROTHERS
119 S. 4th St., Forrest Bldg., Phila.

GLOUCESTER, N.J.

DURHAM SPINNING MILLS HOLLAND & WEBB, Ltd.

J. BLACKWOOD CAMERON

American Casualty Bldg. Reading, Pa.

COTTON YARNS

Combed *Carded* *Mercerized*

Representatives

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308 Chestnut St.

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R. D. McDONALD
James Bldg.

Statesville, N. C.
D. F. WALLACE,
Jenkins Bldg.

O. S. HAWES & BRO.

FALL RIVER, MASS.

COTTON YARNS ALL FORMS AND NUMBERS

COTTON YARN MARKETS

Yarn Gains Yield to Irregular Prices

Spinners Continue Firm, but Dealers Apparently Do Not Look for Rise in Prices

NEW YORK.—Last week evidence of considerable improvement, as far as inquiry was concerned, was noted. During the last few days this improvement seems to have been conspicuous by its absence and the market has quieted appreciably. It is also evident that there are certain traders who have no very firm convictions as to the future of cotton and yarn, judging by some of the prices reported. It must be said, however, that these irregularities are confined almost altogether to sellers. Much has been said of late regarding the firmness of the spinner and the causes thereof. Each week brings to light an increasing number of spinners who are refusing to quote for nearby delivery and the date at which they will promise shipment is being advanced materially. There is no doubt the spinner's statistical position is very strong. There are always exceptions to every rule and there are spinners who have yarn on hand which they are willing to sell at the market. But where such an instance is recorded once or twice, numerous instances are to be noted where no stocks are in evidence as is exemplified by the period for which the spinner is willing to quote.

Spinners' Position Strong

Whatever may be said about the future of cotton and of yarn, there seems little question but that the spinner will continue his firmness of attitude regarding prices unless there should be a drastic decline in market levels. There are those in the selling market who feel it may be a desirable thing to sell short for future delivery. In fact, the prophecy is being more or less freely made that by May, when reports on acreage begin to have their influence on the price of cotton, yarns will be a cent below their present level. There is nothing in the status of spinners, however, to justify this prediction. If they continue until that time to be as far sold ahead as they are today it will take a decided break in raw material to cause them to name lower figures. There is also no doubt that the level at which the spinner has sold is decidedly above the prices which are being named today. Comment has been made that since the first of the year the spread between spinners' prices and those at which the consumer has bought has been constantly narrowing. Events of the last few days would seem to make

(Continued on page 104)

Cotton Yarn Quotations

(Corrected at close of business Jan 27.)
Spot Cotton, Jan. 27, 1926—20.90c.; Jan. 28, 1925—23.90c.

Carded—(Average Quality)

Single Skeins and Tubes—(Warp Twist)

4s to 8s	—	—34	20s	37	—37½
10s	—	—34½	24s	39	—39½
12s	—	—35	26s	40	—41
14s	—	—35½	30s	—	—43½
16s	—	—36	40s	52	—53

Two-Ply Skeins and Tubes

8s-2	34	—34½	26s-2	42	—43
10s-2	34½	—35	30s-2	44	—45
12s-2	35	—35½	36s-2	51	—52
14s-2	—	—36	40s-2	52	—53
16s-2	—	—36½	40s-2 High breakage	60	—61
20s-2	37	—37½	50s-2	68	—69
24s-2	40	—41			

Single Warps

10s	—	—35	24s	—	—40
12s	—	—35½	26s	41½	—42
14s	—	—36	30s	—	—44
16s	—	—36½	40s	54	—55
20s	37½	—38			

Two-Ply Warps

8s-2	—	—35	24s-2	—	—41½
10s-2	—	—35½	26s-2	—	—42
12s-2	—	—36	30s-2	44½	—45
14s-2	—	—36½	40s-2 ordinary	52	—53
16s-2	—	—37½	50s-2	68	—69
20s-2	37½	—38½			

8s-3 and 4-ply skeins and tubes; tinged, 30-31c.; white, 33-34c.

Hosiery Cones (Frame Spun)

8s	—	—34	22s	37½	—38
10s	34½	—35	22s (silver and Jaeger)	39½	—40
12s	35	—35½	24s	—	—39
14s	35½	—36	26s	40	—41
16s	36	—36½	30s tying in	41	—42
18s	—	—37	30s extra quality	44	—45
20s	37	—37½	40s	53	—54

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	54	—55	50s-2	78	—80
30s-2	59	—60	60s-2	—	—85
36s-2	66	—67	70s-2	95	—1 00
40s-2	68	—70	80s-2	1 12	—1 15

Singles

12s	44	—45	30s	55	—56
14s	45	—46	38s	64	—66
16s	46	—47	40s	67	—68
18s	47	—48	50s	78	—80
20s	48	—49	60s	85	—88
24s	50	—51	70s	96	—1 00
28s	52	—53	80s	1 10	—1 15

Mercerized Cones—(Combed, Ungassed)

26s-2	70	—72	50s-2	89	—92
30s-2	72	—74	60s-2	98	—1 02
36s-2	77	—79	70s-2	1 13	—1 18
40s-2	81	—84	80s-2	1 30	—1 35
45s-2	86	—88			

Peeler—(Super Quality)

Single Cones

	Carded		Combed			Carded		Combed	
10s	—	—38	47	—49	26s	—	—43	56	—58
14s	—	—39	49	—51	30s	—	—46	60	—62
16s	—	—39½	50	—52	36s	—	—52	66	—70
18s	—	—40	51	—53	40s	56	—58	72	—78
20s	—	—40½	53	—55	50s	—	—	82	—88
24s	—	—42	54	—56	60s	—	—	92	—98

Combed Cones, Warps and Tubes

20s-2	58	—60	40s-2	75	—80
24s-2	60	—62	50s-2	83	—88
28s-2	62	—64	60s-2	90	—95
30s-2	64	—66	70s-2	1 02	—1 10
36s-2	70	—72	80s-2	1 20	—1 30

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones
2, 3, and 4-ply

	Peeler Average		Peeler Best		Sakelarides Average	Sakelarides Best
24s	—	—68	—	—72	Nominal	Nominal
30s	—	—68	73	—75	Nominal	Nominal
36s	71	—73	76	—78	Nominal	Nominal
40s	76	—78	81	—83	Nominal	Nominal
45s	81	—83	86	—88	Nominal	Nominal
50s	86	—88	91	—96	Nominal	Nominal
60s	96	—97½	1 02½	—1 05	Nominal	Nominal
100s	—	—			....	2 00—2 70

Fair Interest; Quotations Steady

Good Demand for Knitting Yarns Reported — Spinners' Prices Firm and Unchanged

PHILADELPHIA.—From a price standpoint there has been no decided change made during the week, spinners and dealers holding firmly to their former asking prices. A similar situation is found in business placed by manufacturers, sales being usually made at a cent lower than lowest priced spinner will consider but unchanged from last week. Trading has been of fair proportions, being larger than for any week of December and, in a majority of instances, much larger than for any corresponding week of January of last year. So far as the present month is concerned dealers report a good month to date so far as volume is concerned but generally unsatisfactory from a profit standpoint, most sales necessitating the cutting of commissions. On the other hand, spinners' margins are felt to be adequate and larger than during most of last year. Spinners are in an independent position due to good volume of forward business on their books and dealers are unable to secure important concessions from them.

Carded Knitting Sales

There have been a number of fair sized contracts for carded knitting yarns placed, going to up-state knitters and also a fair number of orders closed with balbriggan underwear mills in New York state. Average quality has been sold on a basis of 34c to 34½c for 10s for April, May and June delivery, while better qualities have sold at 35c. Coarse counts, ranging from 9s to 16s, have been the most active up-state, while 16s and 22s are the counts sold in New York the latter count moving on a basis of 37½c to 38c. A more spotty situation is found in extra-carded yarns as these spinners are unable to make nearby deliveries and have turned down offers specifying February shipments although prices would have been satisfactory to them. Sales of 30s have been made at 44c and 26s at a cent less; while a high grade 30s was sold at 45c to an up-state mill which took 100,000 lbs. at this figure.

Weaving Yarns Unchanged

Quotations of weaving yarns have not changed, spinners asking 39c to 40c for average grade 20s-2 warps and 45c to 46c for 30s-2. Dealers report sales of the former at 37c although several manufacturers assert they are able to buy at 36½c; while sales of 30s-2 warps have been reported in fair volume at 44½c for average

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

MAIN OFFICE
Bankers Trust Building
PHILADELPHIA

Johnston Building
CHARLOTTE, N. C.

Adams-Franklin Building
CHICAGO, ILL.

READING, PA.

James Building
CHATTANOOGA, TENN.

Westaway Building
HAMILTON, CANADA

MILLS
CHESTER, PA.

Cotton Yarn Markets—Continued

MANCHESTER YARN CABLE

Manchester, Eng., Jan. 27 (Special Cable to TEXTILE WORLD).—American yarn quotations are better held. Larger sales in finer counts. Active demand in Egyptian yarns. New short time scheme in American spinners' mills now in operation. Production estimated at 72% of full.

grade yarn. Plush qualities are held at one to two cents above these figures. Of these two counts a greater degree of steadiness is found in 20s-2 warps than in 30s-2 which is in larger supply. Dealers state there is a better possibility of them securing concessions in 30s-2 than in 20s-2, which are firm at 38½c to 39c with spinners. Dealers report they have accumulated fair sized stocks of the latter count and can make prompt deliveries. Plush mills are taking yarn less actively than heretofore; while electrical concerns are active buyers so far this year.

Commission Cutting

One of the most noticeable changes found in the market and which has become more noticeable since the first of the year is the concerted report from commission houses of their intention to stop selling yarns at less than spinners' prices. In other words an endeavor will be made to curtail so far as possible the shading of commissions to book business. Although definite information is difficult to obtain it is generally felt that this practice has been less frequent since the first of this year. This was no doubt caused by the showing of annual statements of commission houses which in most instances showed a fair volume of business for the year but an unsatisfactory margin of profit, caused by drastic cutting of commissions during a large part of the year. Numerous houses now assert they can see no justification for a continuance of this practice and unless it is controlled it will affect the entire trade.

Large Sales Rumored

There has been no especial development in combed qualities, there being no important changes in quotations although a slightly easier trend is apparent in several counts. Spinners are willing to figure on new business at 77c for 50s-2, 84c for 60s-2, 93c for 70s-2 and $1.10 for 80s-2, being a cent lower than previous quotations. Mercerizers have not been active in the combed market this week. Single combed qualities have also been dull and unchanged, 18s being offered at 48c, large amounts being obtainable at a cent less.

There are reports in the market to the effect large contracts for mercerized yarns have been placed last week and early this week; one to the effect a large western hosiery concern had purchased half a million pounds and another concern had bought half this quantity. These two important sales could not be confirmed. Prices of mercerized yarns are slightly easier, contracts being taken as low as 78c for 40s-2 while 60s-2 are quoted at 98c as compared with former asking price of $1.00.

Demand Still Slow

Prices for Near Delivery Hold Remarkably Firm

BOSTON.—On nearly all cotton yarns for near delivery prices hold remarkably firm in spite of the continued narrow demand and the indifference of most users toward distant deliveries. While the comparatively stable price of cotton is a supporting factor, it is evident that the market is getting its chief support from the well sold condition of the majority of spinners through February and well into March, and that they have their production better covered with orders than was generally supposed.

In some quarters proffers of medium and coarse count carded yarns are being made for March and later delivery 1 to 2c below average quotations for prompt delivery, some of these coming from direct-selling spinners and others bearing the ear marks of short selling by dealers. The comparatively little interest reported to be shown in these proffers reflects a wide divergence of opinion between spinners and users as to the future course of the market. The bearish element is confident of lower cotton prices and of an increase in production in excess of demand, and users holding these views feel that the worst that can happen is that they will be obliged to pay current minimum prices when they are forced into the market. On the other hand, spinners who are refusing to cut prices for forward delivery are confident that demand will equal supply and tend to counterbalance any possible decline in raw material prices; furthermore, they have their production so well covered with orders during February and March that they will not cross the low price bridge until they come to it.

Spinners are holding 20s-2 warps in some instances as high as 39 to 40c and can sell easily for prompt delivery at 38c, yet proffers of good white yarns for March and later delivery are reported as low as 37c. With spinners asking as high as 45 to 46c for 30s-2 warps they can be sold easily for prompt delivery at 44 to 44½c yet are being offered for March and later delivery at 43 to 43½c. For frame spun cones a basis of 35 to 36c is asked by many spinners for 10s, can be sold easily for prompt delivery

GROVES MILLS, Inc.

SUPER QUALITY

COTTON YARNS

COMBED PEELER, 24s to 80s, single and plies

CONES, TUBES, SKEINS AND WARPS

Samples and quotations promptly furnished

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MILLS AT GASTONIA, N. C.

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SWIFT SPINNING MILLS — BRADLEY MFG. CO. — MUSCOGEE MFG. CO.

Whites, Stock, Dyed and Heathers

Cotton Yarns of Quality

ALL of COLUMBUS, GA.

FROM MILL DIRECT TO CONSUMER

BURNS-PARR, Inc.

COTTON AND RAYON YARNS

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HARWOOD CASH & CO., LTD.
Fine Yarns for Curtains, Lovers, Voile, Etc.
Mansfield, England

Authorized U. S. Representative
HOLLANDSCHE KUNSTZIJDE INDUSTRIE
Breda, Holland

JAMES E. MITCHELL COMPANY

Cotton Yarns

Philadelphia Boston

FORREST BROTHERS

Forrest Bldg., 119 S. Fourth St., Phila., Pa.

Superior Quality Knitting Yarns

Sole Representatives

Bladenboro Cotton Mills—Vass Cotton Mills

8s to 30s Extra Carded

H.S.RICH & CO.
COTTON YARNS
150-152 SOUTH WATER ST
PROVIDENCE, R.I.

SOUTHERN MERCERIZING CO.
TRYON, NORTH CAROLINA

Our Specialty—
SINGLE Mercerized

Yarn for Splicing and Plaiting

Single Mercerized Yarns up to 100/1—Also Two Ply Mercerized 100/s to 140/s

Wire or write us for prices and samples

SOUTHERN MERCERIZING CO.
TRYON, NORTH CAROLINA

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308 Chestnut St.

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913 James Building
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T.J. PORTER & SONS

FINE SINGLE YARNS
60s to 200s

COMBED SAKELARIDES
and SEA ISLAND
In Skeins or on Cops,
Tubes or Cones
Immediate Deliveries

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BRANCH SALES OFFICES
NEW YORK LOS ANGELES

CATLIN & COMPANY, Inc.
COTTON YARNS
SOLE AGENTS FOR
LAWTON SPINNING COMPANY
TREMONT and SUFFOLK MILLS
and other mills furnishing full range of all numbers
NEW YORK BOSTON PHILADELPHIA CHICAGO

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RAYON; Straight and Converted
Tel. Lombard 1623
COTTON YARNS
Drexel Bldg., PHILADELPHIA

THE J. R. MONTGOMERY CO.
WINDSOR LOCKS, CONN.
Manufacturers of
MERCERIZED COTTON YARNS Give the high Silk-like lustre In Knit Goods and Woven Fabrics
NOVELTY YARNS Poucle, Bourette and Spirals in Cotton, Wool, Worsted, Mohair and Silk.
COTTON WARPS On Beams, Jacks, Spools and Tubes In Fancy Twist, Colors and Printed

COTTON YARNS
PLUS
SERVICE
ANY COUNT OR VARIETY
EASTERN OR SOUTHERN
GREY OR PROCESSED
Advice Based on Our Experience of Thirty Years in Bleaching, Dyeing, Mercerizing, Etc., at Your Service
E. J. McCaughey, 51 Arlington St., Pawtucket, R. I.

Cotton Yarn Markets—Continued

at 34½c yet are offered for March and later delivery at 33½ to 34c.

Similar low priced selling for forward delivery is less common on combed and fine count carded yarns, but proffers for March delivery are occasionally 1 to 2c below current minimum quotations.

Cotton Yarn Notes

Cannon Mills, Inc., Philadelphia, are now acting as selling agents for the Norcott Mills Co., Concord, N. C., spinners of high grade single and ply knitting yarns.

* * *

Hyde-Rakestraw Co., 226 Chestnut St., Philadelphia, announce that David E. Colehower, who has been representing them in the Pennsylvania state market for several years, is no longer connected with them and they have made other arrangements for sale of their yarns in the up-state market.

* * *

C. V. Albright, who has been covering the Philadelphia and up-state trade for Cannon Mills, Inc., Philadelphia, is now permanently located in Reading for this organization and will devote his entire time to the up-state market.

* * *

William Drinkwater, manager of Harding Tilton & Company's cotton yarn department, announces the opening of offices in the James Building, Chattanooga, Tenn., with Robert H. Griffith in charge of that territory. Mr. Griffith has been the representative of the Johnston Mills Company in Chattanooga.

* * *

The T. E. Hatch Company, cotton and rayon merchants, Boston, Mass., have opened New York City offices in the Flatiron Building, 949 Broadway, with Alexander King as their local representative.

* * *

William S. Waterman, who has been sales manager for the Osceola Mills, Inc., has severed his connection with the organization.

* * *

Samuel G. Pollock, who has been associated with the Osceola Mills, Inc., Philadelphia, has been appointed sales manager for this organization, with offices 412 Liberty Building, Broad & Chestnut Streets, Philadelphia. This direct sales organization handles the yarns spun by Osceola Mills, Inc., Mountain View Mills, Inc., Hanover Thread Mills, Inc., all of Gastonia, N. C.

Textile Section of U. S. Rubber Co. Moves to New Location

The Textile Section of the United States Rubber Co. announces its removal from 122 Adams street, Newark, N. J., to 451 South Jefferson street, Orange, N. J.

Data on Boll Weevil Hibernation

WASHINGTON, D. C.—The number of boll weevils hibernating in the cotton belt last fall was higher than in any previous year, with one exception, reports the Department of Agriculture. Farmers are warned by the Department not to conclude from the comparative immunity from boll weevil infestation which they have had during the last two years, that similar conditions will exist in 1926. Winter temperatures and summer climatic conditions, and not the amount of weevil damage done in the last two years, will determine infestation this year, according to the Department.

Further Complications on Cotton Crop Reporting

WASHINGTON, D. C.—In a quandary as to what changes shall be made in the cotton reporting system, further complicated by the request of the American Cotton Growers' Exchange and co-operative organizations that the present system be not tampered with, the unofficial cotton committee in Congress, called upon W. F. Callander and other members of the Crop Reporting Board, William M. Steuart, director of the Census and other officials of that Bureau, on Friday to explain their methods.

Selling Agents Must Make it Clear They Act only as Agents

Decision by the Court of Appeals in the suit of the Stafford Springs Worsted Co. against T. A. Shaw & Co., a dry goods commission house, in which a judgment of $20,057 was obtained by the plaintiff, involves the point whether the dry goods commission firms act as principals or agents.

After T. A. Shaw & Co. had delivered part of an order, sold for the account of Woolknit Mills, Eureka, Cal., they notified the Stafford Springs Worsted Co. that the Woolknit Co. had gone out of business and there would be no further delivery. The plaintiff brought suit for the value of the undelivered goods and the defendant disclaimed liability, claiming it was only an agent.

This claim was upheld in the Supreme Court. An appeal to the Appellate Division resulted in the case being sent back to the Supreme Court for a new trial. This time a verdict was given the Stafford Springs Worsted Co.

On an appeal to the Appellate Division, the second time the case was presented resulted in a unanimous support of the verdict of the Supreme Court in favor of the plaintiff. Finally the Court of Appeals unanimously sustained the verdict reached in the Appellate Division and the Supreme Court.

The verdict makes it evident that selling agents must make it clear in their contracts that they are acting only as agents and not as principals in the transaction.

CANNON YARNS

Cotton Yarns of Quality

Confidence!— In business, is that invisible but invaluable asset which is gained only by years of honorable dealing and the delivery of Quality merchandise, backed by a sincere and intelligent service—

Cannon Mills enjoy this confidence to a high degree, and it will always be our aim to guard it as a sacred trust.

CANNON MILLS
INC.
PHILADELPHIA

New York Providence Boston
Reading, Pa. Chicago Utica, N. Y.
Chattanooga

THE STANDARD OF VALUE & QUALITY

COTTON PRODUCTS COMPANY

Bankers Trust Building Philadelphia, Pa.

High Grade Warps for MERCERIZING

Selling Agents for

The ELMORE COMPANY, Spindale, N. C.

SINGLE MERCERIZED YARNS

Bleached, Dyed, Mercerized
and Glazed Sewing Threads

McCONNEL & CO., Ltd.

MANCHESTER, ENGLAND

Spinners and Doublers of Fine Cotton Yarns especially adapted for the making of Laces, Voile, Fine Hosiery, Dress Goods and for insulating wires. : : : : : : : : :

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HIGH GRADE COTTON YARNS White, Colors, Bleached
On Beams, Jack Spools, Cones, Skeins and Chain Warps
FAST-BLACKS & COLORS {For Woolen Mills a Specialty} WE SELL DIRECT

WM. WHITAKER & SONS

Olney, Philadelphia
COTTON CARDING and CARDED COTTON
Roving, Shuttle Cops, etc.

COTTON WARPS

DANA WARP MILLS Westbrook, Maine
Cotton Yarn and Warps, Carded and Combed
WHITE and COLORED SINGLE and PLY SELL DIRECT

PHILA. COTTON YARN CO.

COMBED CARDED YARNS KNITTING WEAVING

135 S. 2nd St., Philadelphia

COTTON YARN SHIPMENTS TO PHILADELPHIA, PA.

Shipments consigned to our care are carefully and promptly handled upon arrival by our large fleet of Auto Trucks and Teams with experienced employees. Representatives at all Terminal Stations and Wharves daily. Cartage prices quoted upon inquiry.

PETER CAVANAUGH, Inc.
222 Chestnut St. Philadelphia, Pa.
Freight Forwarders, Transfer Agents and Bonded Draymen
Established 1873

Cotton Yarn Markets—Continued

Southern Yarn Bulletin Reports on Manufacturing Margins

CHARLOTTE, N. C., Jan. 22.—The cotton yarn bulletin of the Southern Yarn Spinners' Association follows: "The yarn market remains quiet although there is a considerable amount of buying in small quantities for prompt shipment. Buyers have not yet come into the market for future deliveries of material quantities. Spinners are reported to be well supplied with orders and are not striving for orders at the present time. Prices remain firm with spinners' prices at a slight advance over last week. The demand has strengthened for carded weaving yarns with a fair demand for hosiery yarns.

"A comparison of cotton prices plus waste as compared with yarn prices less commission, discounts and freight for the year 1925, shows that on 20s-2 warps in the month of January the manufacturing margin was 11.09c, decreasing to 6.74c in June and finally reaching the high point of 14.98c in October. On 30s single hosiery cones, the manufacturing margin was 15c in January, decreasing to 8.75c in June and finally increasing to 15.05 in October. On 12s single skeins, the manufacturing margin was 8.53c in January, decreasing to 3.97c in June and finally increasing to 10.37c in October.

"In January, 1925, the manufacturing margin represented about replacement values. The decrease beginning in February finally reached its low point in June with so small a manufacturing margin as to show a material loss on all sales accepted at prevailing prices. During the summer months and the early fall months, while the price of cotton and yarns was below the level in January, the manufacturing margin showed a gradual increase, finally reaching a figure considerably better than replacement value in October. For the month of December prices of both cotton and yarns reached the low point for the year but in spite of that the manufacturing margin represented almost replacement values. Operations were materially curtailed during the summer months for lack of business and in the early fall months and until almost the end of the year by the shortage of power occasioned by the drouth. The fact that although both the price of cotton and yarns were materially lower in October than at the beginning of the year and that the manufacturing margin should have been greater in October than during the preceding portion of the year, indicates beyond question the material benefit that the spinners experienced due to the enforced curtailment.

"The market at the present time is potentially strong and if operations are regulated in accordance with demand, profitable business will result."

Cotton Waste Stagnant

Little Real Improvement Yet Shown in Consuming Demand

BOSTON.—No real improvement is observable in the cotton waste market and the general situation is, as a matter of fact, less satisfactory than it was a couple of weeks ago. Larger supplies of waste are being received from the mills and the consumption of cotton continuing to increase suggests that supplies of the various descriptions will continue large for some time to come. Consuming demand on the other hand shows no expansion and as the supply is large and the demand small there can only be one trend to the market at the moment and that is downward.

Houses with men on the road are in receipt of communications tending to show that not a few consumers of strips, oily cards and similar materials have gone in for purchasing low grade cotton and in several instances the consumption of waste cotton has been largely displaced. Another rather disturbing feature is the decline in demand from the woolen industry which at the present time is losing out to worsteds and even in the case of business being done on woolen fabrics it runs largely to styles in which any amount of cotton waste on a large scale cannot be utilized. The general outlook at the moment therefore is not very bright.

Current Quotations

Peeler comber	17 —17½c.
Peeler Strips	16 —16½c.
Egyptian comber	16 —16½c.
Choice willowed fly	9½—10c.
Choice willowed picker	7 — 7½c.
Sak. strips	22 —23c.
Linters (mill run)	6 — 6½c.
Spoolers (single)	14½—15c.
Fine White cop	15½—16c.

Cotton Waste Trade Notes

The Edward Rose Company of 222 Summer street has acquired the waste business of the Union Wadding Company of Pawtucket, R. I. R. N. Dana, formerly vice-president of the Union Wadding Company is now vice-president of the Edward Rose Company. F. R. Bartelt formerly with the Edward Rose Company has now become associated with the Leigh Textile Company.

The Board of Directors of the American Cotton Waste Exchange met recently and considered favorably the informal proposal of the American Linter Association to cease functioning as a separate organization and unite with the American Cotton Waste Exchange. Regular formal acceptance of the proposition will follow a communication from the president of the American Linter Association, Edgar L. Pearson of Houston, Texas, to Clarence R. Smith, president of the Cotton Waste Exchange. At the monthly meeting Feb. 2 the proposal will come up for discussion as in the last resort final action lies with the members of the exchange.

J. B. JAMIESON COMPANY
COTTON YARNS
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Experience linked with Service — Insure your entire satisfaction
Weaving—COTTON YARNS—Knitting
Sold by
"Industrial"
are Good Yarns
INDUSTRIAL YARN CORPORATION
88 LEONARD STREET, NEW YORK

GATE CITY COTTON MILLS
Manufacturers of
Superior Quality
WHITE KNITTING YARN on CONES
We sell direct to Knitters and guarantee satisfaction
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Cotton and Worsted Yarns
PROVIDENCE, R. I.
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COTTON YARNS
Carded and Combed—Gassed and Ungassed

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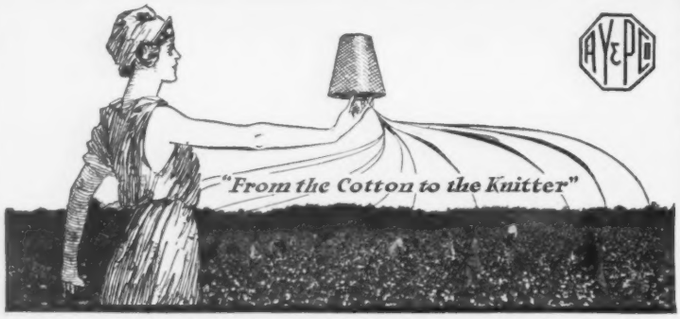
EWING-THOMAS CONVERTING CO.
Specialists in Mercerized Yarns
CHESTER, PA.
Warp Mercerizing for the Trade
Gassed—Natural—Bleached—Colors
DOUBLE MERCERIZED SPECIAL PROCESS



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AMERICAN YARN & PROCESSING CO.

General Office:
Mount Holly, N. C.

Spinners and Mercerizers

of

High Grade Combed and Carded Yarns

Our Mercerized Yarns are the Product of Our Own Mills

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MERCERIZED
YARNS
Spindale
N.C.

Single Yarns
MERCERIZED
Bleached and Dyed on Cones

Specializing in Fugitive Shades for Plaiting and Splicing

THE ELMORE COMPANY
Spindale, N. C.

Selling Agents

Cotton Products Co.
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GLOBE DYE WORKS

Some say competition is the life of trade; others disagree

As far as we are concerned, the "ayes" have it. Comparison has brought us some of our best customers, — and kept them.

GLOBE DYE WORKS CO.
Dyers, Bleachers and Mercerizers
Kinsey & Worth Sts.
Frankford, Pa.

COTTON MARKETS

Cotton Seems Stable Between 18 and 20c

New Crop Prospects Awaited to Make New Price Levels—Buying New Crops Near 18c

The cotton market has been quiet during the week with prices showing a tendency to work lower under comparatively small offerings. Evidently the near month short interest had been substantially reduced on the recent advance to about the 20½c level for March and there was probably a feeling that even if this price was not sufficient to bring cotton here from the South, the market would not have to go much higher to attract shipments.

With the slackening of the near month demand the market lacked one of its chief recent sources of support, and while there was nothing to indicate any general pressure of spot offerings in the South, prices eased under realizing or liquidation and scattered selling.

Trade pricing helped to steady the market as it approached the 19½c level for May, and 18c for October, but was in no great volume and the market had all the earmarks of stabilization with a feeling that it was likely to remain so pending the development of new crop prospects.

The long and short of it appears to be that the amount of cotton still available in the South at between the 19½ and 20½c levels is sufficient to check advances. On the other hand, the extent of the world's needs and the disposition of the trade to secure cover against forward requirements at around the 18c level, as evidenced by scale down buying in the new crop months, has proved sufficient to check declines.

Between these two factors, it is not surprising that the market should be stabilized, and it is becoming a question whether a stabilized market is of real advantage to the manufacturer, unless, indeed, it is permanently stabilized, which can hardly be the case with cotton owing to the uncertainties of future crops.

In the meantime, with the South unwilling to sell spots freely below the 20c level and with the trade unwilling to buy futures freely above the 18c level, the market is naturally maintaining a premium on the near months. There has been much criticism of these near month premiums, although there have been many seasons in the past when they have prevailed without material curtailment of business. No doubt, it would be advantageous if holders of spot cotton for which there might be no immediate trade outlet, could sell hedges in forward deliveries at premiums which would pay their carrying charges, but with the present crop ample and with a possibility that the coming crop may be large, it is difficult to find either trade investors or speculative buyers who will accept the risks of furnishing a market for hedges at premiums over the spot markets.

The following table shows Wednesday's closing prices in the leading spot markets of the country, with the usual comparisons:

Market	Jan. 20	Jan. 27	Chge.	Let. Yr.	Sales
Galveston	20.85	20.75	—10	23.65	9,465
New Orleans	20.54	20.07	—47	23.65	15,511
Mobile	19.90	19.70	—20	23.25	761
Savannah	20.04	19.66	—38	23.66	1,401
Norfolk	20.25	20.19	— 6	23.69	2,547
New York	21.05	20.90	—15	23.90	....
Augusta	20.00	19.81	—19	23.38	830
Memphis	20.00	20.00	....	22.77	21,850
St. Louis	20.75	20.00	—75	23.56	....
Houston	20.75	20.45	—30	23.65	19,698
Dallas	19.95	19.75	—20	23.15	19,605

The following differences on and off middlings are given as compiled from the reports received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract:

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F	1.50†	2.00†	1.25†	1.25†	1.51†
S. G. M	1.25†	1.50†	1.00†	1.00†	1.21†
G. M	1.00†	1.00†	.75†	.75†	.93†
S. M	.75†	.50†	.50†	.63†	.65†
S. L. M	1.25*	1.00*	1.25*	1.00*	1.15*
L. M	2.50*	3.00*	2.50*	3.00*	2.90*
S. G. O.**	4.00*	5.50*	3.75*	4.00*	4.58*
G. O.**	5.25*	6.75*	5.00*	5.50*	5.95*
YELLOW TINGED					
G. M	.50*	1.00*	.25*	.25*	.50*
S. M	.75*	1.25*	.75*	.63*	.94*
M.**	1.75*	1.50*	1.50*	1.50*	1.98*
S. L. M.**	3.00*	2.50*	2.50*	2.50*	3.43*
L. M.**	4.00*	4.75*	3.50*	4.50*	5.05*
YELLOW STAINED					
G. M	2.25*	2.50*	1.50*	1.50*	2.00*
S. M.**	2.50*	2.75*	2.00*	2.00*	2.50*
M.**	3.25*	3.00*	2.75*	3.00*	3.18*
BLUE STAINED					
G. M.**	2.00*	3.25*	1.38*	1.38*	2.04*
S. M.**	2.50*	3.50*	1.88*	1.50*	2.70*
M. **	3.25*	3.75*	2.75*	2.50*	3.55*

Cotton Statistical Data

(Fluctuations of Futures, N. Y.)

	Closed Jan. 21	For High	Week Low	Closed Jan. 27	Chge
Feb.	20.32	20.37	20.00	20.01	— .31
March	20.17	20.50	19.91	20.16	— .01
April	19.80	19.94	19.77	19.87	— .02
May	19.62	19.92	19.37	19.57	— .05
June	19.31	19.36	19.18	19.21	— .10
July	19.00	19.26	18.70	18.92	— .08
Aug.	18.60	18.66	18.47	18.52	— .08
Sept.	18.35	18.41	18.23	18.32	— .03
Oct.	18.21	18.43	18.04	18.18	— .03
Nov.	18.11	18.16	17.97	18.05	— .06
Dec.	18.00	18.25	17.77	17.93	— .07

Spot Fluctuations for Week

(Middling)

	N York	N Orleans	L'pool
Fri., Jan. 23	28.85c.	20.41c.	10.76d.
Sat., Jan. 23	21.00c.	20.64c.	10.75d.
Mon., Jan. 25	21.00c.	20.23c.	10.81d.
Tues., Jan. 26	20.85c.	20.00c.	10.72d.
Wed., Jan. 27	20.90c.	20.07c.	10.64d.
Thurs., Jan. 28	20.90c.	20.70c.	10.71d.

Spot Fluctuations and Stocks

	Prices Jan. 27	Stocks This week	Stocks Last year
Galveston	20.75	662,247	571,752
New Orleans	20.07	508,079	445,373
Mobile	19.70	43,595	11,922
Savannah	19.66	87,991	73,741
Charleston	....	57,121	37,631
Wilmington	....	42,166	34,926
Norfolk	20.19	144,530	108,533
Baltimore	20.50	1,393	1,371
Augusta	19.81	109,067	65,474
Memphis	20.00	284,364	113,474
St. Louis	20.00	15,580	4,023
Houston	20.45	759,954	642,385
Little Rock	20.00	64,947	35,098

A Complete Range of Cotton Yarns

If you use cotton yarns you can find in the Quissett line exactly the kind and count required.

These yarns are used for a wide range of purposes, including underwear, hosiery, threads, embroideries, weaving, insulating, tires, lace work, lace curtains, etc.

Samples cheerfully furnished.

Any number from 2 to 120. Any ply from 2 up. Cable and Hawser.

Carded and Combed Cotton Yarns in all Numbers and Descriptions.
Ply Yarns our Specialty.
Egyptians, Sea Island, Peelers, Sakellarides, Pimas and Peruvians.

Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
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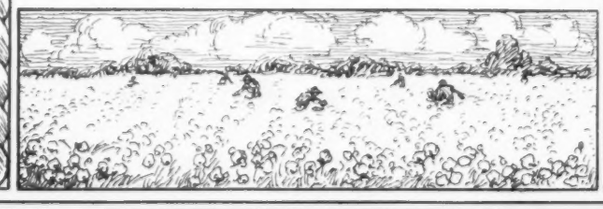
QUISSETT MEANS QUALITY



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"A good wound cone is an advertisement in itself."

Do you know that "ordinary" cones are costing you thousands of dollars yearly?

Insist on
PAIRPOINT Quality and PAIRPOINT Service

Cone and tube makers for over 30 years
Making one quality only—The Best

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New Bedford, Mass.

Andrew G. Pierce, Jr., *President* — Thomas A. Tripp, *Vice-President* — William A. Clarke, *Treasurer* — Frederick R. Fish, *General Manager*

Seeing Color Truthfully from the Mill to the Ultimate Customer

Type CP 60
Complete, $110.00
The Standard Lamp of the Expert Colorist

Macbeth
COLOR IDENTIFICATION
Lamps

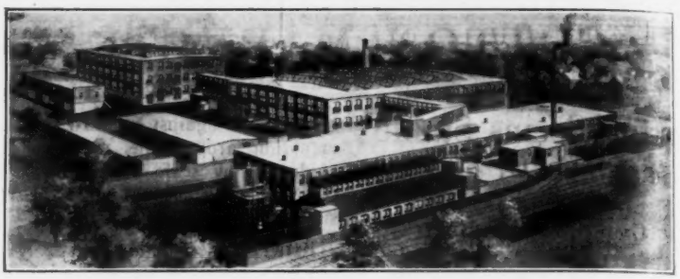
have been doing day-and-night duty during the past 6 years in hundreds of Dye-Houses, in Textile Examining and Wholesale Sales Rooms, in Stock Rooms of Cutting-up Houses, and in Retail Stores. The lamp with the high average in reorders. Reorders that come through satisfactory service. A service worth, in many instances, hundreds of dollars a year and now secured for a price that has a standby charge of less than 10 cents per day.* Sold under a guarantee. A well made copper-encased lamp, that will stand up in any steam and vapor atmosphere where a man can work. The light is from an ordinary clear glass Mazda C bulb; adapted to direct or alternating current 110 to 250 volts.

* On the basis of the total investment with interest, written off in 5 years. The lamps sold 6 years ago are still rendering satisfactory service, which would be at an expense of less than 7½ cents per day.

Macbeth Daylighting Co., Inc.

Manufacturers of apparatus for the scientific reproduction of daylight

237 West 17th St., New York, N. Y.



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BLEACHERS, DYERS AND MERCERIZERS OF COTTON YARNS AND WARPS

Winding on Cops, Tubes or Cones

Manufacturers of Cotton Yarns in Fast Colors—Also Glazed Yarns

"Sewing and Stitching Threads for All Industries"

RAYON DYEING AND WINDING

To Cut the Cost of Mercerizing—

Install Zaremba Soda Recovery Apparatus

Caustic recovered from washwater at low cost.
No lime—no causticizing required.
For use with gray goods as well as white goods.

Our equipment is giving excellent results in large and small plants where it has been thoroughly tested by years of use.

Write for details

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506 Crosby Bldg. — **Buffalo, N. Y.**

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The Halliwell Company

Dyers, Bleachers and Mercerizers of Cotton Yarns in Warps or Skeins

Fast Colors A Specialty
High Class Mercerizing in warps only

A new plant, latest and most modern machinery and equipment, backed by thirty-five years of specialized experience, guarantees service and satisfaction.

The Halliwell Company

PAWTUCKET, — RHODE ISLAND

SOLWAY DYEING & TEXTILE CO.

PAWTUCKET, R. I.

Dyers, Bleachers and Mercerizers of Cotton Yarns, Warps or Skeins — ABSOLUTELY FAST COLORS

Cotton Markets—Continued

Southern Trade Slack

Easier to Buy Than Sell Low Grades; Others the Reverse

MEMPHIS, TENN., Jan. 25.—Demand for cotton, in this market, was slack all last week, but was relatively better for the brighter ordinary to low middling grades showing good staple than for other grades and off-colors. Sales were smaller and inactivity at first hands reflected the small amount of new business being booked by shippers and exporters. About an equal proportion of purchases appear to be going on orders and into investment stocks. The general disposition was to attribute the lull to waiting for the census report on ginnings; ginnings were about 100,000 bales smaller than expected; but are regarded as pointing to a crop of approximately 16,000,000 bales.

Increased activity is now expected, but recently it has been confined to bargain hunters. It is easier to buy than sell the low grades, but the reverse is true as to high and medium grades, and especially so as to medium grades. Low grade selling pressure has increased slightly, but more business could be done if sellers generally were more willing to make concessions. Most owners of low grades expect higher prices and are holding where they are financially able to do so.

Rather brisk demand developed about two weeks ago for export to the Continent was of short duration. Nothing is doing with Liverpool. Domestic shippers are going East and to the Carolinas with types. These types are considered very desirable, and owing to unusual weather conditions are of considerable variety; they, as a rule, represent selected lots immediately available. Shippers are unwilling to sell short because of difficulty in finding types to match.

Prices are about where they were a week ago notwithstanding a moderate decline in futures. The off colors, blues, grays and dullish muddy grades below middling, in lengths up to commercial 1⅛ usually sell at 7 to 9c. discount, while longer staples sell at discounts of 950 to 1,250 points. The price range on sales reported during the week was from 10c for gin-run bollies to 25c, for middling full 1⅛ staples. Other sales included strict good ordinary bright 1⅛ at 16c, strict low middling 1 1-6 at 21c, strict low middling, grayish, 1 to 1 1-16 at 20c, strict middling 1 at 21 to 21½c, and strict middling ⅞ at 20c.

Market Statistics

Basis Middling

	Saturday Jan. 23	Saturday Jan. 16
10 Markets Average...	20.23	20.34
Memphis	20.00	20.00

Premium Staples

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1 ¼-in	25 @27c.
1 3-16 in.....	27½@29c.
1 ½-in	29½@32c.

Current Sales

	For week	Prev. week	Week before
Memphis Total ...	16,500	21,100	17,200
F. O. B. Included..	9,900	11,200	9,550
10 Markets	110,932	99,049	110,937

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Gross Receipts	51,436	41,765	27,662
Net Receipts	20,746	13,083	8,435
Total since Aug 1, net	510,459	353,783	218,682
Shipments	48,261	42,589	28,230
Total since Aug. 1.	1,030,214	832,735	591,662
Total Stock	282,911	115,489	117,962
Increase for week..	3,175	*824	*598
Unsold Stock in hands of Memphis factors.....	127,000	26,000	.....

* Decrease.

Domestic Staples Firm

Egyptians Decline About 100 Points Despite Government

BOSTON, Jan. 27.—Domestic premium and extra staple cottons of strict low middling and better grade remain unalterably firm in spite of limited demand from spinners, being supported by a considerable active demand from shippers and dealers who are covering contracts and replacements. The lower grades, although moving very slowly, are fairly steady in price. The Egyptian market, on the other hand, has developed considerable weakness during the week, despite government buying of Sak; spinners are out of the market as lower prices seem inevitable.

There is no quotable change in flat prices of premium and extra staple domestic cottons although the futures market shows a net decline of about 25 points for the week. Basis is very firm on both Delta and Carolina cottons with some shippers asking advances of 25 to 50 points.

The Egyptian market has weakened steadily since the January Sak. option went out at $35.00 on Thursday of last week. During the week ended January 26 the Egyptian government bought 6,000 bales of Sak. in an effort to support declining prices, but without any effect. The decline in the March Sak. option since last Thursday is 170 points, and the net decline for the week is 97 points. The net decline in the February, Upper, option for the week is 122 points and that in the October option 115 points.

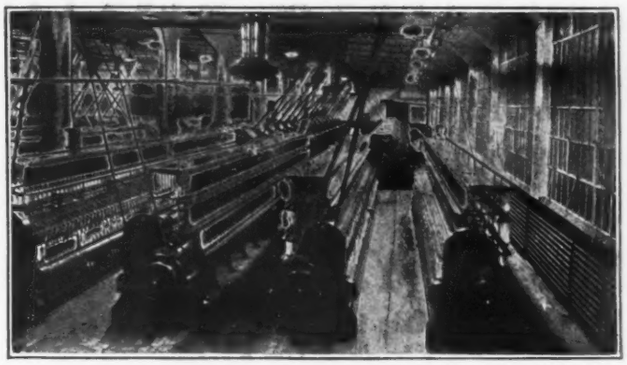
Current Prices

Average prices for Feb.-Mar. shipments of middling and strict middling hard western cotton (full lengths) are as follows:

	Middling	St. Middling
1 1/16 in.....	24 to25c.	25 to26c.
1 1/16 in. to ⅛ in.....	25 to26c.	26 to27c.
1 ⅛ in.....	27 to28c.	28 to29c.
1 3/16 in.....	30 to32c.	32 to34c.
1 ¼ in.....	34 to36c.	36 to38c.

Basis on N. Y. March, 20.16c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for Feb.-Mar. shipment as follows: Medium Sakellarides 36¾c, off 1¼c; Medium Uppers 27⅞c, off 1¼c, since Jan. 20. They report closing prices Jan. 27 on the Alexandria exchange as follows: Mar. Sak. $33.30, off 97 points; Feb. uppers, $24.10, off 122 points from Jan. 20.



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Combining both spinning and mercerizing Standard S. P. Mercerized Yarn is truly a standard of quality and knitting economy.

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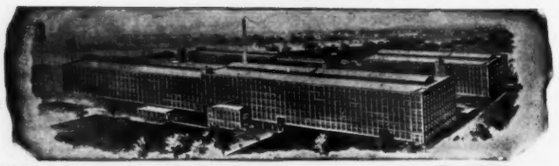

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WORSTED YARN MARKETS

Goods Openings Will Help Yarns

Men's Wear Situation Causes Optimism—New Worsted Dress Fabrics Developing

PHILADELPHIA.—While there has been no appreciable increase in the amount of new business booked this week, there is a more optimistic feeling among spinners and manufacturers than has been noted for several months. It has been demonstrated that yarn quotations are now on a fairly firm basis, no changes of importance occurring during recent weeks and there is a greater degree of confidence among users that no important changes are possible unless fluctuations in wools make this necessary as spinners' margins are now as narrow as can be reasonably expected. With this foundation to build upon optimism concerning the men's wear outlook is generally felt. These mills experienced a good volume of business on light-weight lines and indications point to a satisfactory booking of heavy-weight orders when these are opened. Mills in this vicinity will open new lines during the latter part of February.

Mixtures for Men's Wear

Several men's wear mills have placed heavy-weight yarn contracts this week, although this has not become general, one taking 25,000 lbs. of 2-40s, half-blood, Bradford spun mixtures at $2.35 for next season's lines. A number of these manufacturers have already bought a portion of their yarn for the next season, orders having been placed during the latter two months of last year at prices reported to average $2.35 for the Bradford mixtures. The majority of those not in this class are now content to await the results of the goods openings before they will display any new interest in contracting. French spun mixtures are being quoted at $2.45 to $2.50 for 2-40s half blood. There is also a fair request for gray yarns from this trade, buyers being interested in 2-36s three-eighths and 2-40s half blood. The latter is quoted at $2.00 to $2.10 while manufacturers refuse to pay more than $1.95 at which they assert they are able to buy; buyers report it possible to secure 2-36s at less than $1.65 and sales of 2-32s high quarter have been reported at $1.56.

Dress Goods Demand Spotty

Dress goods in all sorts of sheen twill varieties have been the most active and yarns for these lines have been the brightest so far as dress goods mills have been concerned, sales of 2-50s fine being small in volume. Manufacturers have attractive samples of light-weight fabrics on display which many in the trade believe will attract a larger volume of orders than is expected as there have recently been assertions in the trade that worsted dress goods were a thing of the past and unlikely to return to popular favor. More strenuous efforts on the part of manufacturers to meet new conditions in this trade have been made and developments of last few weeks lead several spinners now to look for a larger volume of business with them than was booked last year. Small sales of 2-50s Bradford were made this week at $2.20; while 30s warp is offered at prices ranging between $2.00 and $2.25, depending upon the spinner and grade required.

Men's Worsted Hosiery

Another promising feature in the market is the expanding interest in single French spun qualities for men's worsted hosiery. This trade experienced a fair to good volume of business last year and reports from jobbers and retailers indicate stocks have been well cleaned out this winter and manufacturers, acting on this, are sampling actively for new lines and spinners assert contracts of good size are in prospect during the month of February. There is a steady call for 26s French spun for jersey cloth purposes, sales being reported at $1.80. Balbriggan manufacturers are turning more noticeably to better grades this year and French spun yarns are coming into a larger share of this business, demand being especially noticeable in such numbers as 2-36s and 2-40s half blood or finer; while last year quarter and low three-eighths were largely specified by this trade. These numbers are also being taken in Bradford qualities.

Outerwear Buying Waits

A limited number of spinners have reduced their quotations on outerwear yarns. Practically all of these, however, formerly asked top prices reported. One who formerly quoted 2-18s and 2-20s at $1.45 is now asking $1.40 for a yarn slightly better than average quarter blood. No spinners have been located willing to quote 2-20s at less than $1.40 although a number of manufacturers assert they are able to buy at $1.37 for average grade. Manufacturers have no fear quotations will be advanced and see a possibility that lower prices will be possible if they are able to stay out of the market for a long enough time to weaken spinners' position. This is the chief characteristic of the current market, mills only taking small amounts and refusing to contract far ahead. A number of bathing suit mills have good sized contracts yet to be delivered which were placed at the opening of their lines last year. Deliveries are being made, these yarns representing the bulk of current spinners' production.

BRADFORD TOP AND YARN CABLE

Bradford, Eng., Jan. 27 (Special Cable to TEXTILE WORLD).—Bradford top market is quiet, users buying only for immediate needs. Most topmakers quote 49 d. for 64s but they can be bought at 48d. Fiftysixes are steady at 33d.; 46s carded at 23d. Botany yarns firm without change in price. Output is well maintained. Crossbred yarns are cheaper owing to reduced Continental demand.

Tops Quiet and Softer

Medium Tops Off 2½%—Noils Inactive and Uncertain

BOSTON.—The top market has been in receipt of very little new business during the last few days and this lack of interest has brought about a softening of values in tops grading from 50s to 58s which as a class are approximately 2½% lower than a week ago. Much poor business experienced by the top market for a considerable period has tended in some measure at least to sap the confidence of wool combers, the only new business appearing for year to date being from manufacturers able to take a little advance cloth business. Current values as given in table of quotations following this market are to be considered nominal. Spot business is altogether too small and as for contracting there is very little done, the bulk of the material being turned out by the independent combers being the filling of specifications on business placed last year. Some fine tops have sold during the week for spot delivery at $1.60. Small quantities of average ⅜ blood, high ¼ blood and 46s have been taken up by manufacturers for immediate consumption.

The noil market is slow and while certain manufacturers are canvassing the situation there has to date been very little purchasing. In the Bradford market more interest is being shown in noils although business is still slow. American purchases are negligible. There is a very general feeling that the bottom has been reached in prices and that a larger demand is likely to appear from British cloth manufacturers producing fabrics having the velour finish.

The noil market has to look forward this year to a larger supply following renewed life and activity in the worsted branch of wool manufacturing. This indicates on a long range view, lower prices for these commodities; if not actually lower then at least relatively lower as compared with prevailing values at any given time on wools and tops. Noil imports in 1925 were quite heavy and as the carded woolen consumption of noils is apparently likely to be smaller than in 1925 there will of course be less incentive to American purchasers in Bradford and other foreign markets. Noils have had very wide fluctuations during the last few years with fine noils as low as 70c at one time and up to around $1.30. It looks as though the noil market might be more speculative during current year.

Quotations

(Corrected to Close of Business Wednesday)

Bradford System

2-12s, low com. (36s)	1.15– 1.20
2-16s, low com. (36-40s)	1.17½–1.22
2-20s to 2-24s, low ¼ (44s)	1.30 –1.35
2-20s to 2-26s, ¼ bld. (46-48s)	1.35 –1.40
2-26s to 2-30s, ¼ bld. (48s)	1.40 –1.50
2-30s to 2-32s, ¼ bld. S.A. (46s)	1.45 –1.50
2-32s, ¼ bld. (48-50s)	1.60 –1.65
2-20s, ⅜ bld. (56s)	1.65 –1.70
2-26s, ⅜ bld. (56s)	1.70 –1.75
2-36s, ⅜ bld. (56s)	1.75 –1.80
2-32s, ½ bld. (60s)	1.90 –1.95
2-36s, ½ bld. (60s)	2.00 –2.05
2-40s, ½ bld. (60-64s)	2.05 –2.10
2-50s, high ½ bld. (64s)	2.25 –2.30
2-50s, fine, (66–70s)	2.30 –2.35
2-60s, fine (70s)	2.85 –2.90

French System

20s, ¼ bld. (48s)	1.50–1.60
20s, high ¼ bld. (50s)	1.60–1.70
20s, ⅜ bld. (56s)	1.75–1.80
30s, ⅜ bld. (56s)	1.80–1.85
30s, ½ bld. (60s)	1.90–1.95
40s, ½ bld. (60–64s)	2.05–2.15
50s, (66–70s)	2.40–2.50
60s (70s)	2.95–3.00

Knitting Yarns in Oil (Bradford)

2-20s, low ¼ bld. (44s)	1.30–1.35
2-18s to 2-20s, ¼ bld. (48s)	1.40–1.45
2-26s, ¼ bld. (48s)	1.45–1.50
2-30s, ¼ bld. (48s)	1.50–1.55
2-20s, ⅜ bld. (56s)	1.60–1.65
2-20s, ½ bld. (60s)	1.95–2.00

French Spun Merino, White

30s, 50–50	1.60–1.65
30s, 60–40	1.73–1.80
30s, 70–30	1.85–1.90
30s, 80–20	1.95–2.05

Current Quotations

Tops	
Fine (64–66)	$1.60–$1.62
Half-blood (60–62)	1.47– 1.50
High ⅜ blood (58s)	1.30– 1.32
Aver. ⅜ blood (56s)	1.22– 1.25
Low ⅜ blood (52–56s)	1.17– 1.20
High ¼ blood (50s)	1.07– 1.08
46s	.99– 1.00
44s	.94– .95
40s	.89– .90
36s	.89– .90
Noils	
Fine	$.93– $.95
Half-blood	.90– .92
High ⅜ blood	.85– .88
Aver. ⅜ blood	.75– .80
Low ⅜ blood	.65– .70
High ¼ blood	.58– .60
46s	.50– .55
44s	.48– .50
40s	.45– .50

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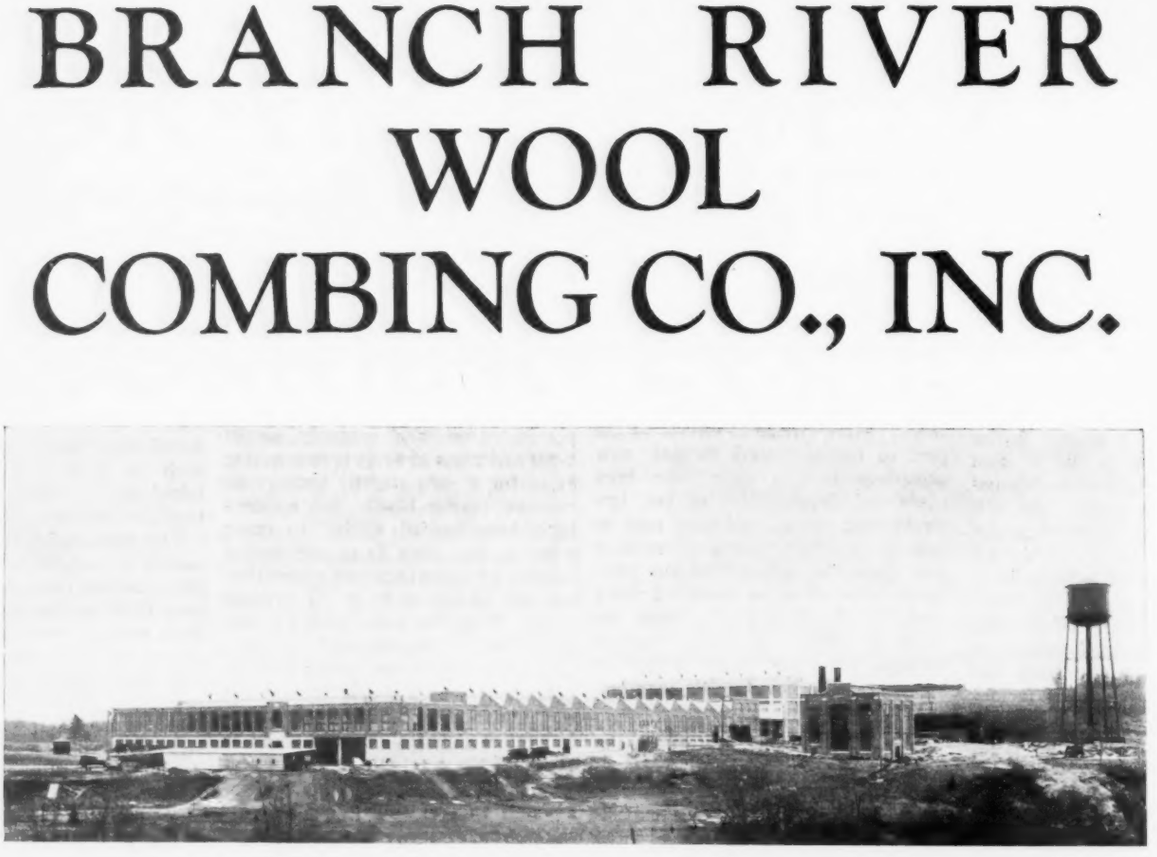

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Worsted Yarn Markets—Continued

Lower Fabrics Discounted

Worsted Yarns on Low Level Await Goods Opening

BOSTON.—On the eve of the showing of worsted fabrics there is an unusually quiet market, much quieter indeed than a year ago and less enthusiastic in spite of the fact that prices at that time in all lines of wool manufacturing were much higher. That lower prices on fabrics will be made is a foregone conclusion. It could not be otherwise with wool and its semi-manufactured products down an approximate 20%. Worsted yarns a year ago were on the whole less advantageously placed than at this time as during the year 1925 wool and tops registered a larger relative decline than yarns, approximately 5% more.

The idea of lower prices on worsted yarns following a lower goods opening is not to be entertained for a moment according to good opinion in this market. A lower goods opening has been fully discounted and should good business be placed for fall and winter fabrics better prices for worsted yarns are not unlikely to be seen, even if wool and tops remain firm, which seems altogether probable.

An early improvement is anticipated in the knitting branch of the industry. Stocks of finished goods are considered low. Prices on knitting yarns are nominal and any apparent softness in price is due less to high values on yarns than to quietness in consuming demand. A little spotty business has been done in weaving yarns of late, stock lots for the most part and taken slightly in the buyer's favor. Mohair yarns are little more lively and there seems a probability of larger demand from the automobile and upholstery trades. As to prices on Bradford spun weaving yarns in this market 2-20s, 50s are quoted $1.43-$1.45; 2-36s, 56s, $1.70-$1.75 and if made from 58s 10c per pound higher. Half-blood yarns are as low as $1.90-$1.95 from 58-60s and if made from 60s $1.95-$2.00 and if the 2-40s are constructed from 60-62s the price is $2.00-$2.05.

Worsted Yarn Notes

Jas. Doak, Jr., Co., Inc., Trenton Ave., Norris & Blair Sts., Philadelphia, worsted yarn spinners, have appointed E. T. Leonard, 413 N. Third St., as representative for the sale of their yarns in Philadelphia. Mr. Leonard is well known in the trade having been associated with Walter McCook, 117 N. Fifth St., for a number of years recently having started business on his own account at the above address.

ALBANY, N. Y. The knitting plant at 48 Hudson Ave., for years used in manufacturing neckties, has been sold by the estate of the late George T. Stoneman, to Messrs. Bashan & Cohn, of this city.

Wool Growers Discuss Efficiency in Growing and Marketing

BOISE, IDAHO—The National Wool Growers Association's annual convention began Jan. 18 in Boise and was opened with an address of welcome by Governor C. C. Moore. This is the 61st convention of the association.

Frank J. Hagenbarth, president of the association, declared that the present need of the wool industry is intense preparation for more efficient and economical methods in growing and marketing.

Relation of the wool industry to Government, through public grazing lands was the theme of the afternoon session. Salt Lake City, so far is the only bidder for the 1927 convention.

President Hagenbarth declared the industry has practically accomplished after-war and after-deflation stabilization. He attacked "The bureaucratic system of Government that gave the Forestry Bureau legislative, executive and judicial powers with practically no right of appeal."

He declared the sheepmen have confidence in the administration of Secretary of Agriculture Jardine.

Prepare for Leipzig Fair

(*Continued from page 31*)

Britain sent 1,260 buyers to Leipzig; France, 460; Holland, 1,700; Italy, 480; Austria, 2,500; Poland, 1750; Switzerland, 900; Czechoslovakia, 3,450; America, 800, with lesser numbers from other countries.

To provide for the comfort and convenience of the hundreds of American business men who go regularly to Leipzig Fair and to enable them to take their families along on the trip this spring and have them properly entertained in business hours, an official trip is being arranged. This is sponsored by the Leipzig Fair Association and is being managed by the O'Donnell-Murray Business Trips, Hotel Times Square. Howard E. Greene will be the leader. The party will leave on the North German Lloyd Steamer Berlin on Feb. 16 and reach Bremen on Feb. 26. The following day will be spent in sightseeing, business conferences and a banquet at Berlin.

The group will reach Leipzig in time to take part in the opening of the fair on Feb. 28. Assigned representatives of the fair administration will aid the members in sightseeing and in reaching the business people they desire. Some members of the party will go on side trips to Switzerland, Bohemia and to various cities of Germany. With the close of the fair, all members will gather at Paris for four days of sightseeing in and about the city, leaving on March 15 to catch the North German Lloyd steamer Muenchen, which sails for America from Bremen on the following day. The return is scheduled for March 26, extending the entire trip to 38 days.

Pocasset Worsted Company, Inc.

Worsted Yarns

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GRAY AND FANCY SHADES
BRADFORD STEEL SYSTEM
TWISTS AND MIXTURES
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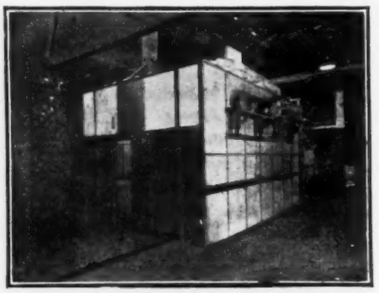

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RAYON AND SILK YARNS

General Situation in Rayon is Steady

Premiums Noted in Middle Market on a Grade Offset Weakness in Foreign Yarn

With the month of January now practically completed, it is interesting to stop and note that the situation has developed this month just about in line with expectations. A sharp demand just after the first of the year sufficed to clear out any small accumulations of high grade yarns in the hands of domestic producers. Business with them has developed excellently and they are now faced again with the necessity of rationing to a certain extent some of their largest customers. On the other hand foreign yarns have recently developed some weakness following an improved tone over the first half of the month.

Premiums were the rule in the jobbing market with a surprisingly large number of hosiery and cotton mills forced to seek additional quantities from second hands. A premium of 10c a pound is still the accepted thing for Viscose yarn 150 denier, "A" quality. Indications are moreover, that if the situation develops additional strength these premiums are likely to be increased. "A" quality in other less popular sizes commands in some cases a small premium but with full list prices in force in any case.

Further weakness developed, according to report last week, in certain of the imported rayon yarns. The preference of American manufacturers for the domestic yarn can be seen clearly in the clean cut differential that exists today. Some fairly large contracts were put through in the 150 denier size at 10c under the market with rumors indicating that even larger cuts have been made.

Prices for the first quarter of 1926, as based on the product of the Viscose Co., Tubize Artificial Silk Co. of America, du Pont Rayon Co. and Industrial Fibre Corp., of America, are as follows:

Denier	"A"	"B"	"C"
50	$3 50	....	....
60	3 40	$3 15	$2 50
70	3 25	3 05	2 50
75	3 10	2 90	2 70
80	3 10	2 90	2 40
90	3 00	2 80	2 40
100	2 90	2 70	2 50
120	2 45	2 30	2 10
130	2 25	2 10	1 90
140	2 15	2 00	1 85
150	2 00	1 90	1 80
160	2 00	1 90	....
170	1 90	1 80	....
180	1 90	1 80	....
200	1 90	1 80	1 70
300	1 75	1 65	1 55
450	1 75	1 60	1 45

Prices on Celanese, made by the American Cellulose & Chemical Mfg. Co. are as follows:

45	$5 00
75	3 75
100	3 65
*120	3 50
150	2 90
*170	2 85
200	$2 75
*250	2 70
300	2 70

* Imported.

Combination yarn prices are as follows:

80 Denier Cellulose

3 ends 13/15 double extra A raw silk	$5 05
4 ends 13/15 double extra A raw silk	5 35
5 ends 13/15 double extra A raw silk	5 75

150 Denier Cellulose

1 end 13/15 double extra A raw silk	3 10
2 ends 13/15 double extra A raw silk	3 45
3 ends 13/15 double extra A raw silk	3 75

Rayon Notes

American Cellulose & Chemical Mfg. Co. Awards Building Contract

AMCELLE, MD. The new addition to be erected at the local plant of the American Cellulose & Chemical Mfg. Co., Ltd., will be steel and concrete, one and one-half story, 160 x 250 ft., estimated to cost $200,000, with equipment. A general contract was awarded recently to Hazelwood & Clauson, Cumberland, Md.

Commercial Fibre Co. Increases Passaic Plant

PASSAIC, N. J. Capacity of the local plant of the Commercial Fibre Co. of America will be increased from 3,800 lbs. to 5,000 lbs. per day, the installation of machinery for handling 1,200 lbs. more daily having been authorized. The capital stock of the company has been increased from $500,000 to $1,000,000.

New Viscose Co.'s Office Building Nearly Complete

MARCUS HOOK, PA. The Viscose Co. is pushing construction on a new office building on East Tenth St. and expects to have the structure ready for occupancy early in Febuary.

Rayon Seller Takes New Offices

G. Robinson & Co., rayon yarns, formerly located at 456 Fourth Ave., have moved to new offices at 44 East 25th St., New York City.

Du Pont Appoints Manager in Charge of Southern Territory

George A. Staples has been appointed assistant sales manager of the du Pont Rayon Co. in charge of the southern territory with headquarters at Old Hickory, Tenn. J. S. Denham, sales manager makes this announcement, stating that the arrangement was effective as of Jan. 22. Mr. Staples has been in the du Pont organization for some time, and was formerly connected with Canadian Explosives.

Associated With Rayon Fibre Products Co.

John R. Stewart, who has been identified with the rayon industry for many years is now associated with the Rayon Fibre Products Co., Inc., Han-

RAYON

FAST DYED SIZED

Fast and Direct Color Work in Single and Ply Silk for the following trades:

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COTTON GOODS
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KNIT GOODS

Special colors dyed to order for prompt delivery. Color card on application.

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LAWRENCE, MASS.

WORSTED AND WORSTED MERINO YARNS
Made on FRENCH SYSTEM OF SPINNING for
UNDERWEAR MANUFACTURERS

Worsted yarns, single and ply, all counts to 70s, and Merino yarns made of combed wool blended with combed Peruvian cotton in several grades and percentages in white, Jaeger and sanitary mixtures

HOSIERY MANUFACTURERS

Worsted and Merino yarns twisted with artificial silk, cotton, mercerized cotton in various qualities and combinations

WOMEN'S DRESS GOODS AND MEN'S WEAR MANUFACTURERS

Single and ply, warp and weft yarns. Also specialties for these trades

SILK CLOTH MANUFACTURERS

Worsted yarns for Poplins, Bengalines and Crepes, natural, gassed, and gassed and scoured

SPECIAL TRADES

Yarns for Knitters of Cloth for Rubber Shoe Tops, also Yarns Manufactured in Accordance with U. S. Army, Navy and Marine Corps Standard Specifications

Cop-tubes, cones, parallel tubes, pirn cops, universal tubes, skeins and Dresser spools

William Whitman Company, Inc.
Sole Agents

BOSTON NEW YORK CHICAGO PHILADELPHIA AMSTERDAM, N. Y. CHARLOTTE, N. C.

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CHEMICAL TEXTILES

IT IS to your interest to know that some of the Snia-Viscosa factories were among the pioneers in the production of Rayon, and gradually developed to be the largest producers in Europe.

In addition to the excellent *qualities* of the Snia-Viscosa Rayon in the raw, known the world over, we are able, through our large plants in this country, to offer the trade an up-to-date *service* in converted yarns of every description, both dyed and in the natural color.

Extensive experience and knowledge are undoubtedly of great advantage to consumers who secure their requirements through this old established and reliable firm.

NOTE:
In addition to Viscose Rayon, we are now prepared to submit samples and quote on 60 to 100 denier sizes of Nitro-Cellulose Rayon (made according to the most generally accepted alcohol process) the excellence of which, for special requirements, is well known to American manufacturers.

Commercial Fibre Co. *of America, Inc.*

General Offices: 15 East 26th St., New York City *Converting Mills:* Passaic, N. J.

REPRESENTATIVES:

Wm. G. Burke, Reading, Pa. Walter Schmaedig, Philadelphia, Pa. Geo. J. Loerzel, Chicago, Ill. Wm. Wulfers, Providence, R. I.
H. T. Cosby, Charlotte, N. C. and Chattanooga, Tenn.

Rayon and Silk Yarns—Continued

cock and Huntingdon Sts., Philadelphia, as treasurer, succeeding A. L. Ford, who has recently sold his interest in this concern to R. G. Bloomer, president.

* * *

Chas. J. Webb Sons Co. Inc., Appointed Agents for Borvisk Rayon

H. Hollesen, Inc., New York, sole U. S. distributors of the Borvisk, A. G., Heizberg-Harz, Germany, has appointed Chas J. Webb Sons Co., Inc., Philadelphia, as exclusive selling agent for Borvisk rayon in this country. This German producer of viscose rayon also has plants in Switzerland and France and plans are now being made for the erection of a plant in England.

Spun Silk Quiet

Market Lacks Animation but Prices Hold Surprisingly Firm

The spun silk market lacked any particular interest last week but prices held surprisingly well in the face of admittedly light buying. Manufacturers continue to operate sparingly buying only small filling-in lots, but this volume seems adequate to maintain present levels. The spinners would prefer to name a lower level of prices for the coming fall season, a level that would in all probability react to their advantage in the form of larger sales of broadcloths and tub silks, but find it difficult because of the higher level of waste silk costs. While both singles and ply yarns noted an inactive demand, such business as was placed fell to the ply yarns. Prices are as follows:

60-2	$6.50	30-2	$5.65
50-2	6.25	20-2	5.30
40-2	5.95	60-1	5.15

Thrown Silk Active

Crepe Yarns Note More Sustained Interest

Thrown silk was in better demand last week with a somewhat larger inquiry for both crepe and organzine. While a great deal of the business placed was for comparatively small filling-in lots, in a few significant instances mills appeared ready to abandon their hand-to-mouth scale of buying. 3 thd and 4 thd crepe was bought for February delivery in addition to the usual requests for spot shipment.

Organzine continued to engage the attention of manufacturers and supplies held around the market were far from large, having been depleted by the sustained demand noted over the last six weeks.

Quotations are as follows:

(60 days basis)

Japan Organize, 2 thd Grand Double Extra in skeins	$8.35
Japan Tram, 3 & 4 thd in skeins	7.65
Japan Tram, 5 thd on cones	7.55
Japan Crepe, 3 thd on bobbins 65 turns	8.30
Japan Crepe, 2 thd XXA on bobbins 50 turns	9.25
Canton Crepe, 14/16 3 thd on bobbins	6.55
Tussah Tram, 2 end on cops	3.50

Industrial Accidents in Georgia

ATLANTA, GA.—The number of accidents in Georgia industrial plants increased somewhat during 1925, according to a report recently made by the industrial commission of the State to the governor, being 28,807 as compared to 27,052 in 1924.

The increase, however, is not thought to be due to increased carelessness on the part of employes or to decreased vigilance and use of safety appliances on the part of employers. It is due, experts say, almost entirely to the great increase in the number of industrial plants in the State and to the expansion of plants during 1925, many more machines and workmen having been added to the industrial forces of the State during the year.

Indeed, it is considered that increased safety measures have checked industrial accidents to a considerable extent during the year and that, if this had not been the case, the number of accidents in 1925 would have been much higher.

F. & H. Sports Fabric Book

(*Continued from page 57*)

cashmere and the worsted ranges. The suiting and coating fabrics exemplify perfectly what the finest of wool and of cashmere can produce. In developing the color ranges for the fabrics, special care was taken to produce shades which would be equally effective for sports and country wear, and for the more dressy type of sports garments that serves the double purpose of both town and country wear."

Among the fabrics which are emphasized because of their quality and popularity are Forstinette, Forstina ant Forsteen, a trio of worsteds of a dull and crepe-like appearance; Kashmireen, Kashmirduna, Kashmirnetka, which, as their names imply, are cashmere materials for suitings, coatings and dresses, and Candia, a coating of lamb's wool which is one of the most important fabrics for spring.

In reference to colors for the coming season, the company says: "If any of the unusual qualities in the sports color range stand out above the rest, they are the qualities of novelty and wearability. There are so many colors which are excellent from the standpoint of style and so many variations in each of these colors which are as new as they are becoming. In general, one may say that rose shades, grays, blues, tans and greens are all very smart and desirable, and are all equally adaptable for either town or country wear. The tendency to use blending or contrasting shades of the same color in a garment has been taken fully into consideration in the creation of the Forstmann range."

Blue, the company states, is one of the reigning favorites of the season, both in the light and darker versions of the color. The Forstmann shade card for spring concludes with a special series of pastel shades and with white in which most of the fabrics are shown.

Manufacturers of
HOSIERY TRAM

Artificial Silk on Cones

Artificial Silk twisted with Raw Silk

Artificial Silk twisted with Worsted

VAN STRAATEN AND HAVEY, Inc.

Artificial Silk twisted with Cotton

Mercerized Cotton twisted with Raw Silk

Sample Cones sent on Request

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New York Office: 389 Fifth Ave.
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Southern Representative:
French Campbell, Jr., 316 James Bldg., Chattanooga, Tenn.
Pennsylvania Representative:
H. L. Nattress, 550 McKnight St., Reading, Pa.
Western Representative:
Campbell & Van O'Linda, Utica, N. Y.

RAYON YARNS

The *sizes* you need
80, 100, 150, 300 and 450 deniers.

The *quality* you need
A, B or C.

The *colors* you need
Natural or dyed in skeins also fast colors.

Wound as you need them
On spools, tubes, cones, cops or bobbins.

When you need them
Deliveries begin within 48 hours after receipt of orders.

At the *right price*.

Let us quote on your requirements

UNITED STATES RAYON CORP.
RAYON SECOND TO NONE LUSTREYARN YARNS
40-46 W. 25TH ST. NEW YORK, N. Y.
Brooklyn: 118 Greenpoint Ave. *Chicago*: 322 Van Buren St.
13th to 14th Aves. and Railroad, Belmar, N. J.

Mr. I. Kno-Wool

says:

"Experience frequently discounts theory."

You may hear—"it can't be done with Reworked Wool,"—but did you ever try it with our BETTER GRADE Stocks?

—Send for Samples—

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REWORKED WOOLS

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EDGAR A. MURRAY'S MOTH DOOM sprayed directly on Wool, Yarns, Finished Cloth, Rugs, etc., not only destroys all worms and larvae, but leaves a preventative against future attack.

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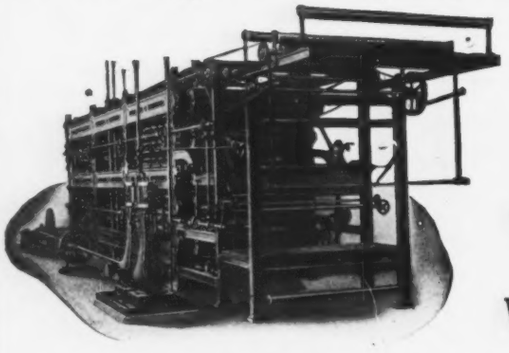

For All Classes of WOOLENS and WORSTEDS

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ECONOMY
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WOOLEN RAGS
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Custom Carbonizing and Picking
CHELSEA, MASS.

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Made of Paper and wood
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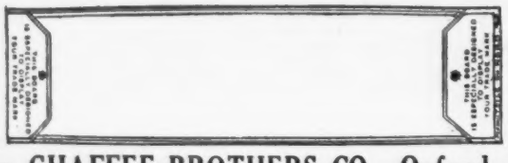

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GORDON BROTHERS, INC.
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Reworked Wool, Wool Waste
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MACUNGIE SILK COMPANY
Macungie, Pa.
For binding Cotton and Woolen Bed Blankets.
Bindings and **Ribbon**
Go-Cart Covers, Kimonas, Bath Robes, etc.
Special Colors or Shades made to order.

WOOL MARKETS

Results of Opening Awaited by Wools

Market Moderately Optimistic with Staple Firm to Easy—Imports Increasing

BOSTON.—The wool market on Summer Street is rather irregular but not greatly disturbed by lower prices in London or by the unexpectedly large inventory disclosed by the recent report of the Boston wool trade association. Mill buyers are on the street looking for weak spots while holders of wool for their part while seeking reasonable trades are disinclined to lift prices to any point that would tend to check mill purchasing. While much larger business is anticipated for wools and tops it is still a tempered optimism. Said a representative of a well known house "There is no real business yet but we expect good business within the next thirty days and hope to witness a good expansion; but if good business does not come within the first six months I do not think any recovery of importance will be made during the last six months of the year."

Wool values are fairly firm, somewhere between the September lows of 1925 and the moderate recovery which took place near the end of the year. There is only moderate mill buying nor is there likely to be much change for the better until well along into February by which time the basis upon which manufacturers are willing to convert clothing wool into fabrics will be known, so far as worsteds are concerned. The London opening while not affecting either the Boston wool or top markets depressed tops in Bradford bringing about a fall of one penny per pound in all qualities ranging from 56s to 70s. During week current top-making wools in Australian market were on a slightly lower basis, 64s quoted to land Boston in bond fractionally under $1 per pound. American buyers are not taking much interest in the London sales, but continue to purchase moderately in Australia.

A quiet period is likely to be in evidence until the great event of the season occurs and the American Woolen Co. shows its worsted fabrics to the goods market on Monday next, Feb. 1. "It is too early to make any predictions as to what will happen in the wool market and we have decided to await the New York opening. There is no reason to expect so far as we can see, any sizable buying of worsted wools immediately following the opening." Lower prices will undoubtedly be seen in worsted fabrics but there will be the usual difficulty in ascertaining how much lower prices really are, particularly in the fancy worsteds and similar materials. In standard fabrics manufacturers could give the goods market in an attempt to secure for themselves a large worsted business, approximately the full decline which has taken place in the raw materials since a year ago, that is approximately 20%. Few people on the street however believe that the opening will be on any such level and if prices should not be any more than 5 to 10% lower than last year the opening will be considered as a bull card indicative of confidence on the part of big manufacturers that the situation is fundamentally sound and cloth prices on such level a reasonable purchase.

A steady succession of imports features the Boston market. More than 6,000,000 lbs. were imported last week and every other day raw material comes in either from Australia, the Cape, Great Britain or South America. For the first half of this week imports have been chiefly of South American wools. More than 3,000 bales arrived up to Tuesday night and as these bales were approximately 1,000 lbs. each, this means a total of 3,000,000 pounds of BA and NV wools entering this port. Another notable import at the beginning of the week was a consignment of 543 bales of mohair. The Boston market though quiet as to new business is still busy delivering wools on old orders and contracts. Steady shipments out of the city for the last few weeks have approximated 4,000,000 lbs. weekly.

BRITISH WOOL CABLE

Bradford, Eng., Jan., 27 (Special Cable to TEXTILE WORLD).—Wool is selling freely at London wool sales both on home and Continental account, at fully opening rates. Greasy crossbreds show firmer tendency.

Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Jan. 23, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in lbs:

RECEIPTS AT BOSTON

Week Ended Jan. 23	1926	1925
Domestic 275,000	6,751,000	5,984,000
Foreign 6,684,000	23,114,000	20,128,000
Total 6,959,000	29,865,000	26,112,000

IMPORTS AT PRINCIPAL PORTS

Boston 6,668,000	23,114,000	20,128,000
Philadelphia .. 919,000	4,003,000	6,949,000
New York..... 2,090,000	8,198,000	4,924,000
Total 9,677,000	35,315,000	32,001,000

Quotations

(Corrected at close of business on Wednesday)

Ohio, Pennsylvania and West Virginia

Fine delaine	.53—.54
Fine clothing	.46—.47
½ blood	.53—.54
⅜ blood	.52—.53
¼ blood	.52—.53

Michigan and New York

Fine delaine	.52—.53
Fine clothing	.44—.46
½ blood	—.52
⅜ blood	.51—.52
¼ blood	.51—.52

California
(Scoured Basis.)

Northern, 12 mo.	1.25—1.30
Sp'g middle counties	1.10—1.12
Southern, 12 mo.	1.02—1.05
Fall free	1.05—1.07
Fall defects	.90— .95
Carbonized	1.05—1.10

Texas
(Scoured Basis.)

Fine 12 mo.	1.25—1.30
Fine 8 mo.	1.15—1.18

Pulled—Eastern
(Scoured Basis.)

A.A.	1.18—1.23
A-fine	1.12—1.17
A-Super	1.05—1.10
B-Super	.85— .92
C-Super	.70— .75
C'bgs fine	1.00—1.05
Medium B	.85— .92
Medium C	.70— .75

Montana, Idaho and Wyoming
(Scoured Basis.)

Staple fine	1.25—1.29
Do. ½ bld.	1.15—1.18
Fine & fine medium clothing	1.18—1.20
⅝ blood	.98—1.02
¼ blood	.93— .96

Utah

Fine	1.26—1.28
Fine medium	1.23—1.25

Colorado, and New Mexico

Fine	1.20—1.25
½ blood	1.13—1.15
⅝ blood	—1.00

Mohair
Domestic

Best combing	.73—.79
Best carding	.63—.70

Foreign (In Bond)

Turkey Fair av.	.52—.53
Cape Firsts	.42—.43

Foreign Clothing and Combing
(In Bond.)

Scoured Basis—Cape (nominal):

Super 12 months	1.00—1.03
Super 10-12 months	.95— .97

Australian:

70s	1.15—1.18
64s	1.00—1.05
58—60s	.90— .92

Grease Basis:

Montevideo: Super:

58—60s	.45—.47
56s	.42—.44
50s	.40—.42

Buenos Aires:

48, 40-44s	.30—.32
5s, 36-40s	.28—.30

Foreign—Carpet
(Grease Basis in bond)

Aleppo: Washed	.38—.40
Angora:	.21—.22
Awassi: Washed	.35—.37
Karadi: Washed	.35—.37
China: Combing	.30—.32
No. 1 W'ld ball	.44—.46
W'ld filling	.30—.32
Szechuen ass't	.31—.32
Cordova	.23—.24
Khorassan: White, 1st clip	.34—.35
2nd clip	.26—.28
Mongolian: Urga	.34—.36
Manchurian	.31—.33
Black Face	.26—.27
Servian skin wool	.30—.31
East India: Kandahar	.36—.38
Vickan'r	.42—.45
Joria	.44—.46

Market Without Trend

Dealers as Well as Manufacturers Adopt Waiting Policy

PHILADELPHIA.—With the exception of noils, which are firmer and more active, the market has been listless and without important interest. The waiting policy pursued by manufacturers in all lines, sales being in all instances for small to medium sized quantities for immediate use, has affected dealers who are content to hold their present stocks until manufacturers display more interest but show no willingness to take on new commitments.

Fine Delaine Sale Reported

The first important sale of fine delaines for a number of weeks has been made, a manufacturer taking 25,000 lbs. of Ohio at 52½c or slightly below curent quotations. This wool cost approximately $1.31 clean. Bulk of interest in fleece wools has been in medium grades heretofore. Quarter blood Missouri has sold at 52c for bright wool; while a lot of 15,000 lbs. from the same state sold for a cent less, the wool being slightly better than a semi-bright. Lower fleece wools have sold at 45c for low quarter; 40c for braid; 41c for medium black; 35c for burry black; 35c for low black and 41 for fine black. Scoured prices of fleece wools are: $1.30 for fine, $1,12 to $1.15 for half blood, 98c to $1.00 for three-eighths, and 90c for quarters.

Montevideo Lot Sold

A 50,000 lb. lot of Montevideo 50s was sold at 41c or a cent above the previous lot, of the same wool. Small sales of all grades of territory wools have been reported at market prices, fine staple bringing slightly less than $1.30 and quarter blood 95c. Offers of 43c were made on fine clothing which would cost about $1.16 clean at this price. Dealers report stocks of these wools small.

Pulled and scoured, as well as carpet wools, have been dull, prices remaining unchanged and sales small in size. Manufacturers in both groups buying only when necessary, refusing to contract ahead. Trading, however, is slightly more active than earlier in the month and considerably better than in December. Pulled demand is for fine grades, no interest being reported in wools lower than Bs. B supers have sold at 85c to 95c, depending on the wool, the lower figure being for a stained lot.

PASSAIC, N. J. According to deeds filed with the County Registrar in Paterson this week, the Cornwall Mills, Inc., a subsidary of the Goodyear Tire & Rubber Co. of Akron, O., purchased the Essex cotton mills of Passaic for $975,000. It is said that full time operation will be started under the new management on March 15.

Eleventh Edition—Completely Revised

The Chemistry and Practice of Sizing

By PERCY BEAN

Completely revised and upwards of 200 pages of new matter incorporated. The practical portions on Size Mixing, Tape Sizing, Warp Sizing, Hank Sizing, Warp Bleaching and Tinting, and Hank Bleaching are dealt with much more fully and four new chapters introduced.

Outline of Contents

Substances for Giving Adhesive Properties to the Size.
Materials Used for Giving Weight and Body to the Size and Yarn.
Ingredients Used to Soften the Size and Yarn, Oily and Greasy Substances.
Soap—Manufacture, Composition and Uses.
Deliquescent Substances Used for Softening and for Giving Weight and Strength to the Yarn.
Ingredients Used for Preserving Size from Mildew.
Size Mixing and the Methods and Plant Employed in Mixing Size.
Colors Used in Tape Sizing for Tinting the Size.
The Practice of Tape Sizing.
Ball or Warp Sizing and the Various Machines Used in the Process.
Ball or Warp Sizing, and the Cause of Some of the Faults Produced by the Processes.
The Tinting of Warps in the Process of Ball Sizing. Warp Bleaching.
Hank Sizing and Bleaching.
The Finishing Process as Applied to Grey Cloth.
The Preparation of the Yarn for the Process of Weaving and the Testing of Sized Yarns.
The Physical and Chemical Properties of Cotton and the Chemical and Microscopical Examination of Textile Fibres.
The Analysis of Sized Grey Cloth.
Damage to which Sized Cloth is Liable, Mildew, Iron Stains, Oil Stains, Fat Stains, etc., etc.
Bleaching—Faults in Sized Cloth which Cause Damage when Bleached and Finished.
The Ventilation of Humidified Weave Sheds.
Size Mixing for Various Purposes, "Thin Boiling" Starches, Table Comparing Beaume and Twaddell.

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are used by hundreds of Dyers, Mills, Bleachers, etc.

Portable—Clamp to any tank up to 3,000 gallons capacity. Operate from light circuit.

***"HY-SPEED"* DYE FILTER TANKS**
Glass lined, complete with pump, etc.

Square Glass Coated Storage Tanks
Acid-resisting. Coated inside and outside

Portable Electric Pumps, etc.

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Alsop Engineering Co. 47 W. 63rd St. New York

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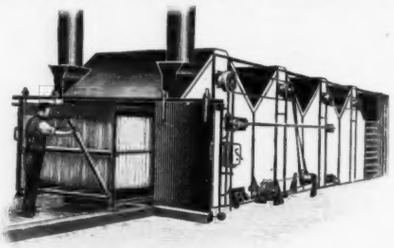

for Textile Materials

Important Novelties!

One writes:
"Mr. ..... especially pointed out that your TURBO Drying Tunnel has a *surprisingly small steam consumption.* He could do away with 2 ..... drying machines by this apparatus. He has gained space and saves much steam." Signed Conte à Crimmitschau.

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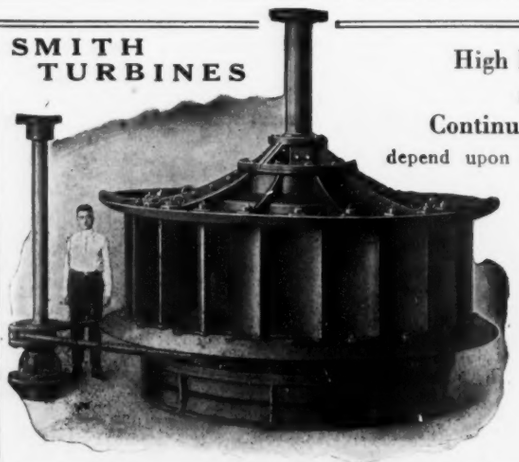

High Efficiency and Continuous Service

depend upon simplicity of design and substantial construction which are outstanding features of SMITH Equipment.

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WATER
Softeners & Filters

Iron and Oil Removal Apparatus–Filtration Equipment–Water Conditioning Apparatus of every description

The Permutit Company
440 Fourth Ave. New York

RAGS, SUBSTITUTES AND WASTE

Wool Rag and Fibre Short of Business

Carded Woolen Mill Demand Covering All Wool Substitutes Still Semi-Stagnant

Recovered wools are not receiving any business in volume from carded woolen manufacturers but felters and other users of substitutes continue to show a fair interest in the market. The advance business placed thus far for the fall of 1926 has been chiefly in worsteds. Woolens will come later and there will be a large and attractive showing of materials. Worsteds however seem to have made an impression on the mind of the distributive market and it is altogether credible that they will carry away the bulk of the business. The outlook for recovered wools therefore is not quite so favorable as it might be but in so large an industry as that of wool manufacturing all kinds of contingencies may arise and some of them may favor the woolen end.

In woolen rags the New York market seems to be more active than the Boston and vicinity market and that is the reason perhaps why prices on the whole have been firmer in the big city. But the situation fundamentally is the same in both markets and centers around the complaint of graders that the price of mixed softs is quite too high to permit of any speculative interest on the part of graders. A little purchasing has been going on in blue worsteds also in the carbonized blue worsted. Blue serges are moving a little more freely. Inquiries cover coarse light merino and light hoods and it is said is said that brown and tan colored rags may be in better call in the near future.

Rag graders in the English market found 1925 a very difficult year. Several times during the year the price of mixed rags was forced upward out of all proportion to the market values of the graded materials. One result of this has been that large amounts of stockings and similar materials accumulated. Merinos stocks throughout the year did reasonably well. The year 1925 closed in the Dewsbury market with a downward tendency which has not yet been corrected.

The wool waste market anticipates better things, but they are quite slow in coming along. Stocks of worsted wastes on the street are supposed to be quite small. Supplies of soft and hard white wastes from the worsted industry are much smaller than the output of noils, the latter materials running approximately 15% of the wool combed. No statistics have been available regarding stocks or worsted wastes held by dealers and traders throughout the United States. Worsted wastes in the Bradford market are firm and considerable quantities of crossbred materials have been accumulated by dealers with the expectation of a revival of American demand.

Quotations

(Corrected at Close of Business Wednesday)

Men's Wear Clips

Worsted—	
Dark	22—23
Light	30—31
Brown	23—24
Blue	34—35
Black	33—34

Women's Wear Clips

Serges—	
White	60—61
Blue	32—33
Black	28—29
Brown	36—38
Green	35—36
Light	31—32
Tan	44—45

Old Woolen Rags

Merinos—		
Coarse light	11	—11½
Fine light	24	—25
Fine dark	7	— 7½
Serges—		
Light	13	—14
Brown	17	—18
Blue	14½	—15
Black	9	— 9½
Red	20	—20½
Green	15	—16
Knit—		
White	46	—47
Black	19	—20
Red	25	—26
Brown	18½	—19
Light Hoods	29	—30

Skirted Worsted

Light	10	—10½
Black	9½	—10
Blue	9	— 9½
Dark	5½	— 6

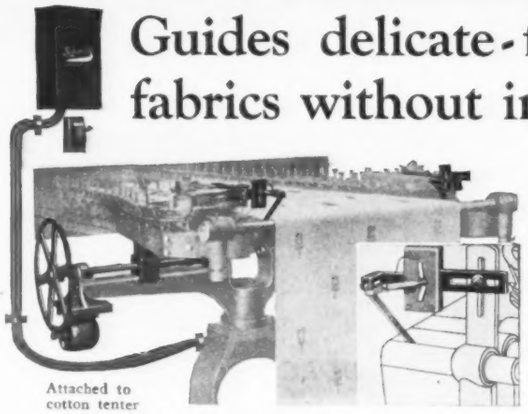
Wool Waste

Lap—	
Fine white	$1.30—$1.35
Fine Colored	1.05— 1.07
Medium Colored	.53— .55
Ring—	
Fine Australian	1.27— 1.30
Fine Domestic	1.25— 1.27
Thread White Worsted—	
Fine	.98— 1.02
½ Blood	.90— .92
⅜ Blood	.70— .75
¼ Blood	.50— .53
Low	.45— .43
Thread Colored Worsted—	
Fine	.47— .49
½ Blood	.44— .46
⅜ Blood	.33— .35
¼ Blood	.28— .30
Low	.23— .25
Carpet	.18— .20
Card	
Fine White	.58— .60
Medium White	.40— .45
Fine Colored	.20— .22
Medium Colored	.10— .12

Reworked Wool

	Cents per lb.
Serges—	
Blue	28—29
Brown	28—30
Green	29—31
Red	32—33
Black	24—25
Knits—	
White	70—75
Red	41—42
Brown	36—38
Merinos—	
Fine light	35—36
Fine dark	18—20
Coarse light	23—24
Worsted Skirted—	
Light	23—24
Dark	17—18
Brown	20—21
Blue	21—22

Guides delicate-faced fabrics without injury



Attached to cotton tenter

The Schwartz Automatic Electric Guider is the only guider known for velvets, plushes and other fabrics with delicate surfaces. This apparatus which is applicable to cotton tenters and wool dryers permits the cloth to run absolutely free and unhampered. It works accurately at any speed and automatically adjusts itself to changes in width and travel.

May we send you the full details?

BLAKE ELECTRIC MFG. CO.
255 Atlantic Ave., Boston, Mass.

The Schwartz AUTOMATIC ELECTRIC GUIDER (PATENTED)

"NO-WASTE" MILL RECEPTACLES

satisfy your most exacting requirements

SEAMLESS CAN
6" to 18" Diam., Inclusive

STEEL CLAD CAR
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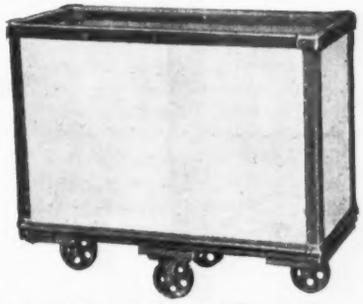

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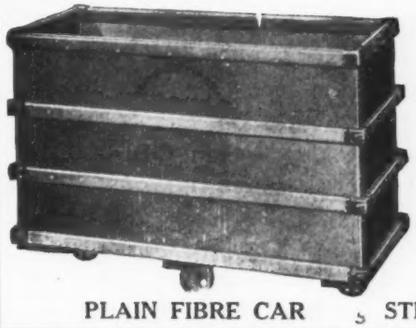
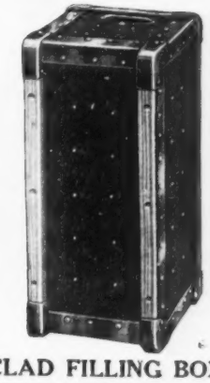


PLAIN FIBRE CAR



STEEL CLAD FILLING BOX

DUROL BLACK BA

A NEW FAST BLACK FOR WOOL AND SILK

THIS new product possesses the same good qualities as its prototype, especially in regards to fastness to light and washing. It is recommended for knitting yarns, and wherever dyeing is accomplished without the use of chromium mordants.

Product samples may be obtained from any of our branches.

National Aniline & Chemical Co., Inc.

40 Rector Street, New York, N. Y.

BOSTON	PHILADELPHIA	SAN FRANCISCO
PROVIDENCE	CHICAGO	MONTREAL
HARTFORD	CHARLOTTE	TORONTO

NATIONAL DYES

DYESTUFFS AND CHEMICALS

Firmness Features Synthetic Materials

Quiet Market in Coal-Tar Dyes—Logwood, Sumac and Cochineal Strong

Firmness seems to be the general feature in the market for coal tar products during the week under review; crudes quite strong, intermediates encountering larger interest from dye manufacturers; finished dyestuffs though not altogether satisfactory in the volume of new business yet showing considerable promise with quotations unaffected by the keen competition which still features this section of the market. The general index number is up fractionally for the week and the trend seems to be in that direction. The list as a whole is barely 5% higher than a year ago, but during the year 1925 a number of adjustments were made and the situation is considered to be much more stable than for a considerable period.

In intermediates, dimethyl aniline is less active and trading is rather erratic with price 31-32c on carload lots. Production of anthraquinone has been sold up for six months ahead there being a much better demand from color makers. Aniline oil continues on its old basis of 17-17½c in drums with the oil for red moving slowly at 39-40c. Aniline salt is not particularly active. For hexalin there is a steady call, quotations ranging from 55 to 60c per pound. In coal tar colors not much forward business has been placed and the low prices for indigo paste does not seem to stimulate any large mill buying. This important product is however quite stable as to price and at the present time as low as can be without production at a loss. Larger demand from the wool textile industry is likely to be encountered during the next few weeks following the placing of business at the heavyweight opening. The acid colors for wool and the sulphur colors for cotton show no material change for the week, either in volume or in price.

Sales of natural dyestuffs are not showing expansion seen sometimes at this period of the year. There are no large stocks of finished materials anywhere and the great strength shown in the primary wood markets is reflected in crystals and liquids though price advances for these materials is improbable in so thin a consuming market. The only advance during the week has been in sumac. Cochineal is in small abundance and high priced. The advance during the last twelve months in this commodity has been not far from 100%.

Miscellaneous Chemicals

Alumina Sulp. com.	1 40	— 1 45
Iron Free	2 00	— 2 05
Alum. Ammonia Lmp.	3½	— 3¾
Potash, Lump	2¾	— 3½
Ammoniac, Sal. white gr., dom.	5½	— 8
Bleach powder, per 100 lb. works, carloads	2 00	— 2 40
Blue Stone	4½	— 5
Calcium Arsenate	7	— 7½
Chlorine, Liq. Cylinders	5½	— 9
Tanks	4	— 4¼
Copperas, ton	12 00	—18 00
Cream of Tartar	21	— 22¼
Epsom Salts, 100 lb.	1 30	— 2 00
Formaldehyde Spot	9	— 9¼
Glauber Salts, 100 lb.	90	— 1 30
Glycerine (C. P.) bbls.	20	— 20½
Cans	21½	— 22
Yellow Crude	18½	— 19
Hydrosulphite Conc.	24	— 25½
Lead—Brown acetate	13½	— 14
White (crystals)	14½	— 15
Lime, acetate, 100 lb.	3 25	— ...
Potassium—Bichromate	8½	— 8¾
Chlorate crystals	8½	— 9
Permangan, tech	14½	— 16
Sodium acetate	5	— 5½
Bichromate	6½	— 6¾
Bisulphite, 35%	1 50	— 1 75
Nitrite	9	— 9½
Phosphate	3¼	— 3¾
Prussiate, yellow	10½	— 11
Sulphide, 60% fused	3¾	— 4
30% crystals	2¾	— 3
Tartar emetic, tech	28	— 30½
Tin—Crystals	41	— 41½
Bichloride, 50 deg.	16¾	— 17
Oxide, bbls.	64	— 65
Zinc Dust	10	— 10½

Acids

Acetic, 28% per 100 lb.	3 13	— 3 38
Citric crystals	45½	— ...
Formic, 90%	10¼	— 11
Lactic, 22%	6	— 7
Muriatic, 18 deg. per 100 lb. in tank cars	80	— 90
Nitric, 36@42 deg. per 100 lb.	4 50	— 6 25
Oxalic	10¾	— 11½
Sulphuric, 66 deg. per ton in tank cars	14 00	—15 00
Tartaric	29	— ...

Alkalies

Ammonia, aqua, 26 deg.	4½	— 8
Borax, Crys. bbls.	5	— ...
Potash, carbonate, 80-85%	6	— 6½
Caustic, 88-92%	7¼	— 7⅞
Soda Ash, 58% light	1 43	— 2 44
Contract, 100 lb.	1 25	— 1 63
Bicarb, per 100 lbs.	1 90	— 2 25
Caustic, 76% per 100 lb.	3 20	— 3 90
Contract, 100 lb.	3 10	— ...
Sal. 100 lb.	1 10	— 1 25

Natural Dyes and Tannins

Fustic: Crystals	20	— 22
Liquid, 51 deg.	10	— 12
Gambier, liquid	13	— 13½
Hematine, crystals	12	— 18
Hypernic Ext.—51 deg.	14	— 15
Indigo—Madras	1 20	— ...
Logwood Extract, liq. 51 deg.	7	— 8
Crystals	16	— 18
Osage Orange, Extract, 51 deg.	7	— 7¼
Osage Orange Crystals	14	— ...
Quercitron extract, 51 deg.	6	— 7
Sumac Ext. dom., ref., 51 deg.	6½	— 7
Extract, stainless	11	— 12
Tannic Acid, tech	35	— 40

Dyestuffs and Intermediaries

Alpha Naphthol, ref.	95	— 1 00
Crude	65	— 70
Alpha Naphylamine	35	— 37
Aniline Oil	16	— 17½
Salt	22	— 24
Beta Naphthol, sublimed	55	— 60
Technical	22	— 24
Dimethylaniline	32	— 34
Metaphenylene Diamine	85	— 90
Paranitraniline	53	— 55

Oils and Soaps

Castor Oil, No. 3	15½	— 16½
Olive Oil, denatured, gal.	1 20	— 1 25
Foots	9	— ...
Red Oil, lb.	11	— 12
Stearic Acid, double presses	16	— 16½
Turkey Red Oil, 50%.	10	— 12

Adhesive and Sizing Materials

Albumen, blood domestic	50	— 60
Egg, technical	80	— ...
Dextrine-Potato	7¾	— 8¼
Corn, bags, 100 lb.	3 87	— 3 92
Do. bbls, 100 lb.	4 14	— 4 19
Gum, British, 100 lb.	4 17	— ...
Do. bbls.	4 44	— ...
Sago flour	3½	— 4
Starch, corn, 100 lb.	3 12	— 3 22
Do. bbls.	3 39	— 3 49
Do, thin boiling, bags, 100 lb.	3 72	— 3 82
Do. bbls	3 99	— 4 09
Potato	6½	— 7¼
Rice	9½	— 10½
Wheat	6½	— 7
Tapioca flour	3½	— 6

Coal Tar Dyes

Direct Colors—		
Black (H-acid)	28	— 35
Black Columbia FF.	50	— 60
Blue, 2 B.	24	— 32
Blue, sky ordinary	60	— 80
Blue, 2 GL.	2 00	— 2 50
Blue, 4 GL.	2 25	— ...
Blue Sky, FF.	95	— 1 50
Blue, Fast, RL.	190	— ...
Blue, Solamine	2 00	— ...
Benzo Azurline	75	— 80
Brown, C.	40	— 60
Brown, M.	70	— 90
Brown, Congo G.	85	— ...
Brown, Congo R.	80	— ...
Green, B.	60	— 90
Green, G.	65	— 90
Orange, Congo	60	— ...
Orange, Fast S.	1 70	— ...
Red, Fast F.	80	— 90
Red, Congo	40	— 50
Benzo Purpurine 4 B.	40	— 60
Benzo Purpurine 10 B.	1 25	— 1 50
Scarlet, 4 BA	1 50	— ...
Scarlet, 4 BS.	2 10	— ...
Scarlet, 8 BS.	2 15	— ...
Scarlet, Diamine B.	1 65	— ...
Violet N.	1 10	— 1 20
Yellow, Chrysophenine	60	— 1 80
Yellow, Stilbene	90	— 95
Developing Colors—		
Black, B H.	40	— 60
Black Zambesi	...	— 90
Bordeaux, Dev.	2 50	— ...
Orange, developed	2 50	— ...
Primuline	1 90	— 1 15
Red, Dev. 7 BL.	2 50	— ...
Scarlet, Dev.	2 50	— ...
Sulphur Colors—		
Black	14	— 24
Blue, cadet	90	— 95
Blue, navy	50	— 60
Brown	20	— 60
Green	55	— 1 50
Green, olive	25	— 50
Yellow	45	— 50
Basic Colors—		
Auramine	96	— 1 60
Bismarck Brown	50	— 60
Chrysoidine	40	— 65
Fuschine crystals	1 50	— 1 75
Malachite green	1 50	— ...
Methylene blue	1 10	— 1 25
Methyl violet	80	— 1 15
Rhodamine B. extone	5 50	— 6 00
Safranine	1 45	— 1 60
Victoria Blue B.	3 10	— ...
Acid Colors—		
Naphthol blue blk.	35	— 60
Naphth lamine black 4 B	50	— 55
Alizarine saphirol	2 75	— 4 00
Alkali blue	3 25	— 3 50
Indigotine	75	— 1 30
Induline (water soluble)	75	— 80
Soluble Blue	3 00	— 3 75
Sulphoneyanine	70	— 95
Sulphone Blue R.	60	— 95
Patent Blue A.	2 85	— ...
Rescorcin brown	80	— 90
Guinea green	1 00	— 2 20
Wool green S.	70	— 1 70
Orange II.	24	— 30
Orange GG crys.	60	— ...
Acid Fuchsine	80	— 90
Azo eosine G.	65	— 82
Crocein scarlet	1 15	— 1 30
Fast red A.	50	— 65
Azo yellow	1 35	— 1 40
F. Light Yellow 2 G.	2 00	— ...
F. Light Yellow 3G.	1 00	— 2 50
Naphthol, yellow	1 35	— 1 40
Chrome Colors—		
Aliz. Black B.	2 00	— ...
Diamond Black PV.	70	— ...
Chrome Blue Black	40	— 50
Chrome Brown	60	— 1 25
Chrome Green	75	— 1 50
Chrome Yellow	45	— 1 10
Indigo—		
Synthetic 20% paste.	14	— 14½

Heavy Chemicals Move in Volume

Bleaching and Soap Making Materials Do Better—Nitric Acid in Aluminum Drums

No important changes this week in the market for textile chemicals. Deliveries on contract are considered quite satisfactory and the movement in the alkalis, bleaching powder, chlorine, copperas and bluestone has been quite good. There is an excellent business on the books of manufacturers of soda ash and caustic soda. The potash compounds are experiencing rather broader market particularly pearlash, or carbonate of potash. There is a routine demand, not particularly extensive at the moment, in the various alums, glaubers salt, liquid ammonia, soda sulphide, as well as the chlorates of soda and potash. Mill demand however is still slow though there are good basic reasons for anticipating a larger consumption of the various materials used in the dyeing and finishing of cotton and wool, semi and fully manufactured products.

Mineral acids move out well on contract, demand centering upon sulphuric and muriatic which are well sold up ahead, while nitric is less active. The carboy committee of the Manufacturing Chemists' Association has approved the use of aluminum drums for shipments of nitric acid. In the organic acids a reduction in the price of citric acid has been made which is considered to be a move on the part of manufacturers to keep imports at as low level as possible. Tartaric acid is unchanged. Oxalic, formic and lactic acids which all find a use in the wool dye-house are quiet and without change. Although the demand for sulphuric continues very good manufacturers are still unable to advance prices.

Oils and fats suitable for the textile industry are quite irregular this week, the index figure showing a slight decline while the market as a whole is less than 2% higher than a year ago. Slight declines have occurred during the week in distilled red oil, the tallows and lard oil. Cocoanut oil is a trifle higher, while the palm oils are unchanged.

Dye & Chemical Notes

Textile Chemists Meet in Burlington, N. C.

BURLINGTON, N. C.—The southern section of the American Association of Textile Chemists and Colorists, will hold its winter meeting at the Alamance Hotel, on Saturday, Jan.

Big Business

Because of the enlarged program of manufacture that present-day conditions demand, the manufacturer who plans wisely and builds on a foundation of "quality" production can command "Big Business."

So definite is his trend toward quality that textile manufacturers are using every effort to produce the highest possible quality in fabrics at a reasonable production cost.

In order to accomplish these results mill men are more than ever before depending upon the distinctive work which the special purpose

Wyandotte Textile Alkalies

accomplish.

Protection to the tensile strength of the fibres, thorough cleansing of the fabrics permitting more even spreading of dyes and that soft, lofty feel which denotes quality are indications of the efficient work of these quality products.

Ask your supply man.

This trade mark in every package

The J. B. FORD CO.
Sole Manufacturers
Wyandotte, Mich.

Starch

EAGLE

The experience of critical operators has shown this popular brand to be the most efficient sizing agent, both for additional WEIGHT and increased STRENGTH of WARP. Penetration accomplishes these important results.

EAGLE STARCH is especially manufactured to cover a wide range of fluidities to meet the needs of all classes of weaves.

EAGLE STARCH penetrates.

CORN PRODUCTS REFINING CO.
NEW YORK
Southern Office: Greenville, S. C.

Starch

W. H. BANNON & CO.
PROVIDENCE, R. I.

BANNON'S BLEACHER'S BLUE

Dyes and Chemicals—Continued

dress "The Importance of The Technical Men to the Textile Industry," will be delivered by Dr. E. C. Brooks, president of the State College, one of the principal institutions in the South engaged in training young men for the textile industry.

A general discussion of a number of live subjects in which the textile chemists and colorists deal, will follow Dr. Brooks, and will be led by M. T. Johnson, of the Judson Mills, Greenville, S. C., J. T. Chase of The National Aniline & Chemical Co., Inc., of Charlotte, N. C., W. D. Shields of the Durham Hosiery Mills, Durham, N. C., C. R. Ephland, of The F. M. Holt Plaid Mills, Burlington, and Malcombe Mackenzie, of the Sandoz Chemical Works Inc., Charlotte.

A. R. Thompson, Jr., of the Rhom and Haas Co., Inc., Charlotte, will address the meeting on his impressions at the annual meeting of the association held recently at Boston.

* * *

Borne Scrymser Annual Dinner

The second annual dinner of the employes of the Borne Scrymser Co. was held at tthe Hotel Brevoort, New York, on Tuesday evening of this week and was a most successful event. The staffs of both the New York and Bayway offices attended.

Thirty guests were present, including Orville G. Waring, president of the company; Albert C. Weed, vice-president and treasurer; Philip C. Meon, secretary; and Everett H. Hinckley, technical executive.

* * *

Valuable Book on Dow Products Published

An extremely valuable book on the color products of The Dow Chemical Co., Midland, Mich., has been prepared and is being distributed to the trade with the compliments of Ciba Co., Inc., Cedar and Washington Sts., New York, sole selling agents for those products.

Entitled "Dow Indigo; Midland Vat Blues; Ciba Blues," this book contains 48 pages of technical information and 32 pages of dyed and printed samples.

The text matter includes a short historical sketch followed by concise practical directions for dye formulae now in use in America. Under indigo are included chapters on the preparation of the various vats; the dyeing of cotton; the dyeing of wool, and the application of indigo to calico printing.

The section on indigo derivatives, covering Midland Vat Blues and Ciba Blue 2B, includes chapters on cotton dyeing, artificial silk dyeing, wool dyeing, silk dyeing, calico printing, wool printing, silk printing, and mixed goods processing.

Acknowledgment is made to Dr. B. Wuth, of the Ciba Co., Inc., New York, sole American representative of the Society of Chemical Industry in Basle, Switzerland, for his compilation of this material and to various textile firms for their cooperation.

* * *

Philadelphia Chemists and Colorists Meet

The January meeting of the Philadelphia Section of the American Association of Textile Chemists and Colorists was held Jan. 29, in the Student Club Room of the Philadelphia Textile School, Bread & Pine Sts. The meeting, which was informal, was preceded by a dinner attended by a large number of members and their friends. The principal address was delivered by C. Y. Wang, chief chemist of the dyestuff department of the E. I. duPont de Nemours & Co., Shanghai, China, who took as his subject "Methods of Dyeing in China." It was announced a joint meeting will be held on Tuesday, Feb. 18, with the Philadelphia Section of the American Chemical Society in the Harrison Laboratory of the University of Pennsylvania, where the combined associations will be addressed by G. J. Esselen, consulting cellulose chemist of Boston, on the subject "Cellulose"—a Brief Consideration of Its Chemistry With Particular Reference to Manufacture and Use of Rayon."

* * *

Canadian Dyestuff Business Merged

WASHINGTON, D. C.—The Consolidated Dyestuff Corp. (Ltd.), has been incorporated with an authorized capitalization of $1,000,000 for the purpose of merging the Canadian business of six firms in Canada holding the exclusive representation of eight German manufacturers, according to the Commerce Department.

The agreement between the German manufacturers and their North American representatives now merged in the Consolidated Dyestuff Corporation (Ltd.), conveys to the latter the sole right of importation into Canada and Newfoundland of the dyestuffs, intermediates, and auxiliary products of these German concerns.

Service of Wholesaler

(*Continued from page 28*)

to the manufacturer all during his existence. In a measure this is true, but this marketing service has been only incidental in his work. The big thing heretofore has been the establishment of a business which would afford him an opportunity to make as large a profit as he could from out of the service to the retailer furnishing him the time and place utilities so vital to his effort and from speculating in merchandise. What ever marketing service was furnished to the manufacturer was an outgrowth from these.

Wholesaler's Opportunity

A glorious opportunity presented itself in the past and is still present for the wholesaler to place at the disposal of the manufacturer a knowledge of

DU PONT DYESTUFFS

Ponsol Red Violet RRNX Paste

THIS latest addition to the Ponsol series, even in the palest of shades, possesses excellent dyeing and fastness properties. As a vat violet it is of particular interest, inasmuch as it is unaffected by either heat or moisture.

Ready solubility, coupled with highly satisfactory penetration and level dyeing properties permits its use on all types of machines.

Ponsol Red Violet RRNX Paste is used to a considerable extent as a shading color of light pinks and mode shades.

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?
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the market which only he was in a position to procure at so small a cost and building upon that knowledge a marketing service to the manufacturer so efficient that the manufacturer would find no need to make any change in the channels through which he could secure the best distribution. The wholesaler in his territory is in daily touch with thousands of retail outlets, can secure information as to the desires of consumer, the quantities likely to be needed, the prices at which textiles could be sold, furnishing a warehousing and selling service to the retailer as well as playing a large part in the use of modern methods of stimulating sales, for a group of manufacturers, that would be more efficient and at a lower cost than for each individual manufacturer, and so enable the wholesaler to make his place in the commercial sun much more important and secure.

Help Needed by Retailer

The second service the wholesaler could perform is already acknowledged as part of his job, but it needs to be done more abundantly. All wholesalers need to enter into it more wholeheartedly. They all need to, very definitely, consider the job of educating the retailer as to what goods he should carry in stock and how best to sell these goods in the face of competition from the other retail outlets, as being as important a part of their work as that of furnishing the time and place utilities. The individual retailer does not have at his disposal information covering market and business condition and the technique of business practise to the same extent as his larger competitors. The wholesaler does have this information at his command as well as the experiences of many of his customers. By putting these at the disposal of his retail customers he will help them to compete with the other retail outlets putting them in a better position to secure and hold a large share of the consumer's business which in turn is passed on to the wholesalers who can in turn pass it on to the manufacturers to whom they are trying to furnish a more complete and important marketing service.

There may be some insurmountable obstacles standing in the way of a full accomplishment of these suggestions, but the solution of the wholesaler's problems is entirely in his own hands and these suggestions do seem to contain the germ of a solution and might therefore be given careful consideration.

N. Y. Cotton Yarn Market

(*Continued from page 77*)

such a statement more or less incorrect for the buyer has been able to obtain figures in many cases practically 3c below the level at which the spinner is holding.

Weaving Yarns Irregular

The above statement applies with particular force to weaving yarns, for while there are exceptions in hosiery yarns, for the most part spinners' prices for the latter are on a practical parity and the figures at which sales are consummated approach pretty closely to the spinner's figure. Certain of the quotations on weaving yarn in an adjacent column do not represent spinners' prices by any means, but nevertheless even lower selling figures than these are reported in a few instances. On 30s-2 warps, for instance, 45c is the bottom price said to be obtainable from the mill, while not a few spinners are asking as high as 47c. Nevertheless it is known that business has been taken at 44½c. and probably this price has been shaded. Offers of 38c. for 30s-2 warps have elicited no reply from the spinner but here again a report of 37c. is current. It is evident that this yarn is out of a dealer's stock and may or may not represent a profit. On the same number an offer of 37c. for 100,000 pound brought the reply from a spinner that he could sell up to June at 38c. but that he was holding his yarn for a higher figure. Speaking of sold-up condition, it is reported that there are a few spinners who are sold ahead as far as July. One instance mentioned last week has been confirmed in the case of a sale of 100,000 pounds for November-December delivery. This was on 10s single skeins to the weaving trade at 33c. It need hardly be said this is a rare exception, for the majority of spinners would not be willing to quote such distant delivery. Also few buyers would operate as far ahead as this. Nevertheless the price appeared satisfactory to both parties and no complaint about the transaction has been made.

Interest in Tinged Yarn

The feeling is gaining currency that the increasing interest in tinged yarn may eventually cause more or less of a scramble for this quality. The sale of 75,000 lbs. of 8s-3 carpet stock at 30½c. is reported. This is said to be a good quality of yarn, better than the ordinary run of material taken by the insulated wire trade. The disparity between tinged and white yarn is thought to be too big. The same count of yarn from white stock cannot be secured under 33½ to 34c. As a result the prediction is made that current prices on tinged yarn are going to show an increase before very long if demand continues. On high breakage yarn spinners are very firm. It is stated to be impossible to secure 40s-2 of this quality under 62c., although the market range is from 60 to 61c.

Knitters' Demand Spasmodic

A few sizable inquiries are noted in the hosiery yarn division of the market but this does not apply generally. Contracts have been made in instances at low prices, which will carry the ordinary knitter for a considerable period. It is not the belief that the trade as a rule is supplied with the season's requirements, but New York state knitters are apparently not very keen to buy at the

moment. Probably one reason is that they have contracted for yarn at considerably below today's figures. An instance of this is the sale some two months ago of a large quantity of 30s single at 39c. Mills are supposed to be delivering this yarn today, although some doubt is expressed as to whether the orders have been covered as yet in their entirety. The market on 30s during the last five or six months has never gone below 40c. as far as the spinner is concerned and a 39c. sale therefore appears to be a short transaction on which the dealer is apparently delivering at a loss. It is said that a sale of some 300,000 pounds of knitting yarn was made last week to a western knitter on a basis of 34½c. basis of 10s on net weight. This brings the price down to 33½c. net—a figure that no spinner would accept today. When it is further considered that out of this price western freight has to be paid it would seem as though the transaction was not profitable to the dealer. A sale of 12,000 pounds of 12s by a direct seller is also reported and the rumored figure is 33½c., which is even relatively lower than the first order mentioned.

OBITUARY

Clifton P. Baker

Clifton Prentiss Baker, treasurer of the Lawrence Mfg. Co., knit goods, Lowell, Mass., died of pneumonia after a week's illness at his home in Dedham, Mass., on Jan. 24, in his 76th year. He was born in West Dedham, May 4, 1850, and received his education at the Dedham public schools. A large part of his early business life was spent in the cotton trade, part of the time in Texas; because of his expert knowledge of cotton and its merchandising he was for many years chairman of the cotton committee of the Arkwright Club of Boston and was largely responsible for the New England terms for buying and selling American cotton adopted jointly by that organization and the New England Cotton Buyers' Association. He had served as treasurer of the Lawrence Mfg. Co. for 25 years, and despite his advanced age he made a trip to the Argentine Republic two years ago to investigate the advisability of establishing a branch plant in that country, his report being unfavorable. He was president of the Locks & Canals Co. of Lowell, the Lowell Corp. Hospital and the Dedham Institution for Savings and a director in several other corporations. Throughout his life he had been prominent in Dedham affairs serving on many important town committees. He is survived by one son, Ross W. Baker. Funeral services were held at his late residence Tuesday afternoon.

Robert Joyce

Robert Joyce, vice-president of Oswald Lever Co., Inc., Philadelphia, died at his home, Sunday, Jan. 24, at the age of 54. Death resulted from pneumonia. Mr. Joyce had been connected with the Oswald Lever Co. for 25 years and was widely known throughout the trade both among textile and machinery manufacturers. He had been vice-president of this concern since 1907, and his circle of acquaintanceship in the industry was extensive because of the large number of personal contacts which he had built up through his long business career. Two of his sons are connected with the Oswald Lever Co., as well as his brother J. D. Joyce. Funeral services were held on Wednesday, bein attended by a large number of Mr. Joyce's former business friends. Besides two sons, his widow and a daughter survive him.

Business News

Parts and Repairs for Paxton & O'Neill Knitting Machines

From time to time TEXTILE WORLD has received inquiries from hoisery manufacturers where they can secure parts for the old Paxton & O'Neill knitting machines, which were made by the Paxton, Price & O'Neill Co., Philadelphia, which was recently liquidated, following the death of Joseph T. Price. For the benefit of our readers, who are operating these machines, we would say that J. B. Price, son of Joseph T. Price, is operating the J. B. Price Machine Works, 872 N. Leithgow Street, Philadelphia, where they carry in stock parts for the Paxton & O'Neill knitting machines, and also take care of any repair work which may be necessary on machines still in operation.

Timken Promotion

The Timken Roller Bearing Co. has promoted R. Chas. Brower to the position of assistant to H. J. Porter, vice-president in charge of sales. Mr. Brower first became associated with the Timken company in 1916, as district manager of the Bearings Service Co., with offices in Detroit. At the dissolution of this company in 1922, the Timken Roller Bearing Service & Sales Co. was organized. He then came to Canton, the headquarters of the new company, as assistant general manager, which position he has held until his present promotion. The present offices will be maintained at Canton.

Klauder-Weldon Schedule Filed

In schedules signed by William E. H. Bell, treasurer, and filed in the U. S. District Court in Philadelphia, the Klauder-Weldon Dyeing Machine Co., of Bethayres, Pa., reports debts of $327,042 and assets of $139,335. A hearing will be held in February at which an offer to buy this property will be presented to the court. Wm. E. H. Bell, who was appointed temporary receiver, has been confirmed as permanent receiver.

Anchor Post Moves Its New York Office

Anchor Post Iron Works announces the removal of its New York sales office to its new location at 9 East 38th Street, New York City.

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Position Wanted

ASSISTANT SUPT. WOOLEN OR WORSTED MILL

Available soon. An exceptional executive with fine experience on all kinds of woolen and worsteds. Capable of producing results. Best of references. Held positions as designer and assistant superintendent for many years with some of the leading woolen and worsted mills. Replies confidential.

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If you need a young man of tact, energy, honesty, common sense, good health and a general technical knowledge of textiles,—here is your opportunity. Experience includes inside semi-executive production, cost and statistical work as well as outside selling. Education includes High School, Evening School of Phila. Textile School and present course at Evening Wharton School of U. of Pa., Christian, 27 years old;—willing to begin in inside or selling capacity with moderate salary.

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Woolen or Worsted, 42 years of age; Proven executive, with thorough technical experience. Services available at reasonably short notice.

Address Adv. 35, Textile World,
334 Fourth Ave., New York.

Situations Wanted

Manufacturers who are in need of superintendents or overseers for any department of mill work may learn of suitable men upon application by mail or telephone to C. T. DONLEVY, care Textile World, 65 Franklin Street, Boston, Mass.

OVERSEER SPINNING IN WOOLEN MILL. Position wanted by man 48 years of age, French, married. Worked on all kinds of woolen goods. Familiar with Davis & Furber and Johnson & Bassett machines. Good recommendations.
O. B. 338, Textile World, Boston, Mass.

ASSISTANT DESIGNER IN WOOLEN MILL. Position wanted by man 23 years of age, American, single. Worked on women's dress goods and suitings. Familiar with Davis & Furber, Crompton & Knowles, Curtis & Marble, Rodney Hunt, George S. Harwood machines. Good references.
O. B. 405, Textile World, Boston, Mass.

OVERSEER COTTON WEAVING. Position wanted by man 41 years of age, American, married. Worked on all kinds of cotton. Familiar with all kinds of looms. Good recommendations.
O. B. 757, Textile World, Boston, Mass.

ASST. SUPT. OR ASST. DESIGNER IN WOOLEN MILL. Position wanted by man 27 years of age, American, married. Worked on fancy cassimeres and plaid back overcoatings. Good recommendations.
O. B. 883, Textile World, Boston, Mass.

MANAGER OR SUPT. WLN. OR WST. MILL. Position wanted by man 50 years of age, Scotch, married. Worked on fancy cassimeres, worsted overcoatings, plain and fancy, also mackinaws. Good recommendations.
O. B. 945, Textile World, Boston, Mass.

FOREMAN OF DYEING OR SECOND HAND. Position wanted by man 42 years of age, American, married. Worked on women's wear, fancy dress goods, tricotines, serges, jersey, velour, all kinds of wooden and worsteds, also union dress goods, cloakings, bolivia, art silk, astrachan, etc. Familiar with all makes of dyeing machinery used in woolen or worsted mill. Good recommendations.
O. B. 956, Textile World, Boston, Mass.

OVERSEER WEAVING WLN. OR WST. MILL. Position wanted by man 42 years of age, American, married. Worked on plain and fancy worsteds and woolens. Familiar with Knowles looms and the 4 cell magazine looms. Good recommendations.
O. B. 987, Textile World, Boston, Mass.

SUPT. WORSTED YARN MILL. Position wanted by man 36 yrs. of age, English, married. Worked on all grades and classes of knitting or weaving yarns. Familiar with any machine making worsted yarns (Bradford system preferred). Good recommendations.
O. B. 125, Textile World, Boston, Mass.

OVERSEER DYEING. Position wanted by man 38 yrs. of age, American, married. Worked on wool, shoddy, cotton, silk, piece dyes, wool scouring, etc. Familiar with Hussong, Klauder-Weldon and other machines used in dye house. Good references.
O. B. 179, Textile World, Boston, Mass.

Position Wanted

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wants to represent spinners in the Philadelphia market on exclusive or semi-exclusive proposition.

Address Adv. 975, Textile World
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22 years' experience, 12 as overseer. Capable of fixing and repairing all makes of machinery; 26 years of age; American; widower. Can furnish the best of references.
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Silk Hosiery Dyer, now employed, wants to change position.

Address Adv. 12, Textile World,
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MASTER MECHANIC. Position wanted by man 40 yrs. of age, English, married. Familiar with Draper, Whitin, Howard & Bullough, Woonsocket Mch. & Press, Saco-Lowell, Fales & Jenks, engines, boilers, water wheels, and electrical machines. Good recommendations.
O. B. 181, Textile World, Boston, Mass.

ASST. SUPT. IN COTTON MILL. Position wanted by man 35 yrs. of age, American, married. Worked on combed yarns, waste and waste yarns, gauze, sheeting, fancy goods in colors, yarns 45s to 8s. Familiar with Whitin, Saco-Lowell, Draper, Entwistle and Barber Colman machines. Good recommendations.
O. B. 245, Textile World, Boston, Mass.

OVERSEER COTTON RING SPINNING, SPOOLING, WARPING AND TWISTING OR SECOND HAND. Position wanted by man 26 years of age, American, single. Worked on all classes of cotton goods. Familiar with Whitin, Biddeford, Saco-Lowell, and Fales & Jenks machines. Good recommendations.
O. B. 251, Textile World, Boston, Mass.

OVERSEER KNITTING. Position wanted by man 28 yrs. of age, American, single. Worked on jackets and jacquard bathing suits, shirts and jerseys. Familiar with Leighton, Brinton, Crane and Nye & Tredick machines. Good recommendations.
O. B. 267, Textile World, Boston, Mass.

SECOND HAND OF WOOLEN OR WST. FINISHING. Position wanted by man 22 years of age, American, single. Worked on all classes of woolen and worsted goods, cotton warp, etc. Familiar with all makes of finishing machinery. Good recommendations.
O. B. 742, Textile World, Boston, Mass.

OVERSEER DYEING IN WLN. OR WST. MILL. Position wanted by man 43 years of age, American, married. Worked on all kinds of woolen and worsted goods. Familiar with all makes dyeing machinery. Good recommendations.
O. B. 779, Textile World, Boston, Mass.

OVERSEER WLN. OR WST. FINISHING OR SECOND HAND. Position wanted by man 29 years of age, Scotch, married. Worked on woolen suitings, and plaid-back overcoatings. Familiar with all makes of finishing machinery. Good recommendations.
O. B. 810, Textile World, Boston, Mass.

SHEAR TENDER IN WOOLEN MILL. Position wanted by man 33 yrs. of age, Scotch, married. Worked on all kinds of ladies' dress goods, plaid back overcoatings, etc. Familiar with all makes of shears and nappers. Good references.
O. B. 856, Textile World, Boston, Mass.

FOREMAN OR ASSISTANT BOARDING AND FINISHING. Position wanted by man 35 yrs. of age, American, married. Worked on cotton, full fashioned and chiffon silk hosiery. Familiar with Hurricane dryers Paramount forms, and Proctor & Schwartz automatic boarding machines. Good references.
O. B. 933, Textile World, Boston, Mass.

OVERSEER SEWING (FANCY WST. & WOOLEN). Position wanted be lady 34 years of age, American, single. Worked on woolens and fancy worsteds. Good references.
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	1 inch	2 inches
1 time	$3.50	$7.00
2 times	7.00	13.20
3 times	10.50	19.20
4 times	13.20	24.80

	3 inches	4 inches
1 time	$10.50	$13.20
2 times	19.20	24.80
3 times	27.90	36.00
4 times	36.00	48.00

Help Wanted

WANTED

Cotton, Mohair and Silk Plush Finisher, must be a man who thoroughly understands this business and has had experience with some well known mill in the same capacity—a permanent position is offered and to the right man a desirable future. This position is with a strongly established concern.

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Man knowing Buyers of Worsted Wastes, Garnetts and Shoddies, and territory adjacent to Philadelphia and South.

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Address Adv. 26, Textile World,
334 Fourth Ave., New York.

WANTED

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Young man familiar with dyeing Silk and Combination Silk and Wool, Rayon and Wool, Mercerized and Cotton Hosiery. Want a young man who has a fair education, and who has been second dyer, but who feels he is competent to take charge, after a short time, of a dye house. He must be dependable and one who is not afraid of work. In first letter give full particulars as to age, past experience, married or single, etc.

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or get the use of a Plush Loom, any width, for a little experimental sample weaving. New idea in Plush and Velvet fabrics.

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We purchase yarns of all kinds. Large and small lots. Send sample, state price and quantity.

SCIENTIFIC TEXTILE CO
Morrisville, Pa.

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See page 552 for Announcement of Textile Directories.

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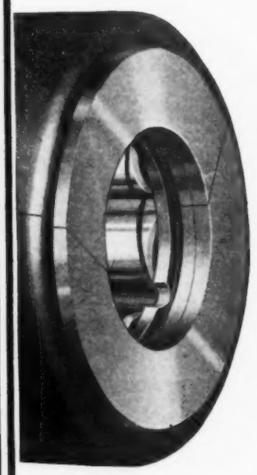

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Better Profit Margins Foreseen for 1926

General Prosperity of 1925 Not Fully Shared by Textile Industry—First Half of New Year Should Mark Healthy Gains in Textile Markets With Larger Future Dependent on General Business—Review of "Analysts" Success in Forecasting

By Dr. Lewis H. Haney, Director, New York University Business Research Bureau, and Editor of

Textile World Analyst

BEFORE taking a look ahead, we will look back over the last twelve months to see the nature of the foundation on which we must build for the year 1926.

Looking Back at 1925

(1) General Business Conditions

The year 1925 fell in the prosperity phase of the business cycle and on the whole the trend of industry was upward. The year ended a little better than it began.

The rise during the year, however, was far from uniform and continuous. Toward the end of 1924, production was too large with the result that stocks of goods accumulated and a period of readjustment was required, which gave the first half of 1925 a very irregular appearance. In a number of basic industries, such as steel and textiles, there was a fair-sized recession. The purchasing power of consumers, however, was large and retail trade expanded throughout the year. As a result the necessary readjustment was effected without any drastic declines and in the second half of the year most lines of business showed good gains.

A comparison of certain important indexes toward the end of 1925 with their position at the same time in 1924 shows how considerable was the net progress registered during the year. Railway car loadings increased about 4.8% (Fig. 9). The employment of labor gained over 5%; steel ingot production gained over 22%; retail trade gained over 16%, and wholesale trade nearly 4%. Production in all basic industries toward the end of 1925 averaged 7.5% greater than it had done toward the beginning. December cotton consumption was 8.3% greater than in the preceding year.

If we were to take as our starting point January, 1925, however, the comparison would not be so favorable. Indeed, the average production in basic industries in November, 1925 was considerably lower than it was in the first month of the year. This shows that there was a peak reached in business early in the year which reflected the so-called Coolidge boom. Our point is that this peak should be ignored in considering the general trend, and that ***when we compare the end of 1925 with the end of 1924 we find a substantial average gain.***

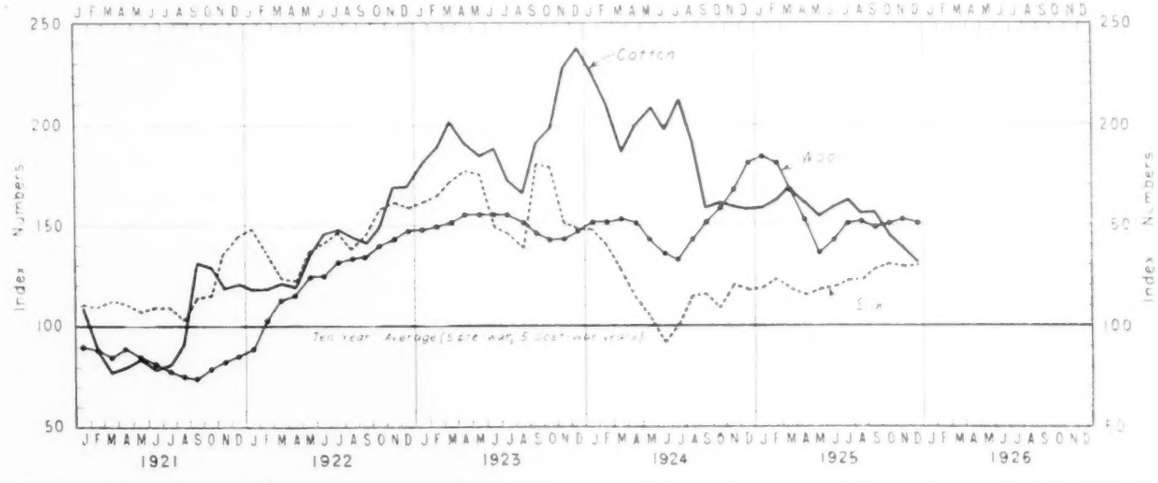
Perhaps 1925 was most notable industrially in two respects: (1) Progress was made toward removing many uncertainties which had tended to depress business, and (2) records were broken in the production of buildings (see Fig. 7) and automobiles.

With regard to the first point, we may refer to the establishment of the gold standard in England and the greater assurance of European peace, to the improved outlook for political conservatism at home, and to the favorable public relations of our railways. The fact that a group of industries which had been very slow in recovering from the post-war depression have been established on a former basis is also notable,—textiles, leather, fertilizer, petroleum, farm machinery and machine tools.

As to the second point, most students of industry are agreed that post-war industry has been largely dependent upon activity in building and automobile construction and these two industries maintained extraordinary activity in 1925. They broke all records, both as to the maximum for any month and as to the total for the year. This meant large demand for many products including textiles, to say nothing of large employment for labor.

Compared with other recent years 1925 was remarkably free from serious maladjustments in industry. At the end of the year we can say that transportation facilities are adequate and efficient; that labor is well employed, but not scarce; that credit is abundant although business is good; and that overproduction is absent. This is certainly not a situation which is likely to precede any major depression in business.

Nevertheless, during the year recently ended certain unsound conditions which had been developing in the preceding year or two became more plainly evident, and careful business observers are watching them closely for signs of danger. Everyone knows what they are, but the reviewer must refer to them, if for no other reason than to keep the warning before business men so that they may help remedy the situation. ***These dangers all center in the use of credit.*** Probably the most important one is that credit may become over-extended in the case of real estate booms. Not only in Florida, but in New York City and in other urban centers, the speculative construction of apartment houses and other types of building has gone so far as to be questionable. In the stock market certain groups of securities have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250
200
150
100
50
Index Numbers
Cotton
Wool
Silk
Ten year Average (5 pre-war, 5 post-war years)
1921
1922
1923
1924
1925
1926

Fig. 1. RELATIVE PRICE OF RAW MATERIALS—Cotton, average daily prices, spot middling upland at New York, N. Y. Cotton Exchange. Wool, TEXTILE WORLD index. Silk, average one-price weekly, Kansai No. 1, Journal of Commerce. All indexes on ten-year base (5 pre-war and 5 post-war years).

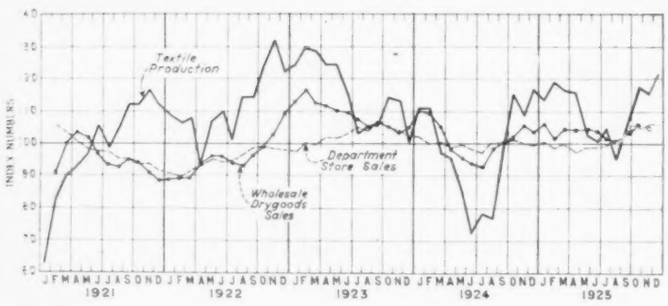


Fig. 2. GENERAL TEXTILE BAROMETER—Textile Production (Composite)—prepared by Standard Statistics Co., 1921 = 100. Wholesale Dry Goods Sales—Adjusted for seasonal variation, three-month moving average centered on middle month; average, 1921-4 = 100. (Federal Reserve Board.) Department Store Sales—Adjusted for normal growth and for seasonal variation, three-month moving average. Computed trend last six years = 100. (Federal Reserve Board.)

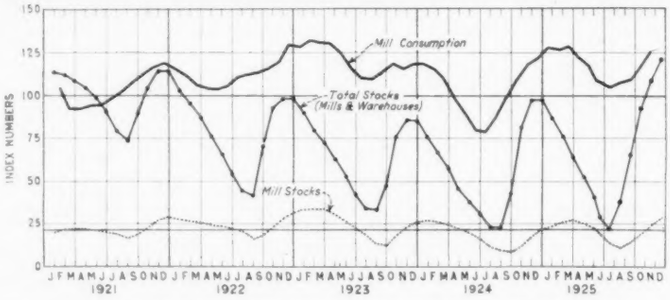


Fig. 3. MILL AND WAREHOUSE STOCKS OF COTTON COMPARED WITH MILL CONSUMPTION—Mill Consumption (excluding linters) adjusted for seasonal variation, three-month moving average; 1921 = 100. Total Stocks—Stocks (excluding linters) on hand at end of month in consuming establishments and in public storage and at compresses; 1921 = 100. Mill Stocks—Stocks (excluding linters) on hand at end of month in consuming establishments; average per cent mill stocks were of total in 1921 = 100. (All of above data from the Dept. of Commerce.)

probably been over-bulled, notably the motor stocks, and the Federal Reserve Bank statements show an unusually large increase in loans secured by stocks and bonds. Brokers' loans are estimated to have reached the enormous sum of $3,000,000,000. Finally, there has been a portentous development of credit to consumers through the installment plan in selling all sorts of goods. We need only point out that this plan may be abused and that unless it is handled conservatively it may lead to an unsound credit situation. Moreover, while it may stimulate retail sales for a considerable time, the end to such a stimulation must come sooner or later and if, meanwhile, production and business activity have been geared up to satisfy a rapidly increasing demand, they will have to be readjusted when the demand ceases to feel the effect of the stimulus. When everybody has his automobile, radio set, and living room suite on the installment plan, he simply does not need any more of these articles, and even though his credit is perfectly sound he resumes the position of buying merely for his replacement requirements.

The general dangers at the end of the year, then, are: first, that credit may become over-extended in certain speculative activities; and second, that the stimulus of credit in retail buying may cease to be effective, thus leading to overproduction.

(2) The Textile Industry in 1925

The textile industry is one of our great basic industries and as such closely reflects the general trend of business. Its history is that of the business cycle in general. Accordingly, much that has been said above applies to it. It began the year rather well, slumped off in the first half, and recovered moderately toward the end.

On the whole, the textile industry in 1925 was considerably better than in 1924. Certainly the volume of production was considerably greater and it is probably fair to say that there was a larger measure of stability. The summer setback was not so sharp or large as that which occurred in the middle of 1924 and the year ended better. (See Fig. 2.) Moreover, the merchandising of textiles showed improvement. The wholesale dry goods trade (Fig. 2) was notably more stable in 1925 than in the preceding year and the average volume was larger. If we can take department store business as fairly reflecting retail trade in textiles, it may be said that the trend was distinctly upward from April through the remainder of the year and that trade was better at the end than at any time in 1924. This was notably true of silks and velvets, ribbons, neckwear and veilings, dresses, etc.; and the linen departments made a strong showing; but woolen dress goods and women's coats, suits, and skirts did not do nearly so well in November, 1925, as in the preceding year.

The general trend of textile prices in 1925 was toward stabilization at a somewhat lower level.

The earnings of textile manufacturers were characterized by small margins, but averaged somewhat better for the year. The silk industry was notably active; the cotton industry showed good improvement; while the wool manufacturing industry was little, if any, more prosperous than in the preceding year. Our indexes, however, indicate that in general the second half of 1925 was characterized by general improvement in the textile industry. When one reflects how long a period of depression the industry has undergone, there is reason for moderate satisfaction in contemplating the developments of the year.

To touch briefly on the three main branches of the industry, it may be said that the outstanding feature has been the size of the cotton crop which promises to be at least 15.6 million bales in the United States and in the neighborhood of 27 million bales for the world as a whole. The price of raw cotton showed rather wide swings, falling considerably in the second quarter and again in the last quarter of the year. (Fig. 1.) The general trend was certainly downward. This condition made the year a trying one for the manufacturer, but clear signs of stabilization toward the end were encouraging and it must be admitted that lower prices for the raw material will in the long run be favorable for the manufacturer.

Throughout 1924 the production by the cotton mills was fairly well adjusted to sales, thanks to the shortage of power in the South and a policy of curtailment in the North. As a result, ***the margin between raw cotton and cotton textiles has shown some improvement.***

The wool manufacturing industry made a less favorable showing in 1925. (Fig. 4.) After a sharp run-up at the end of 1924, there was an equally sharp decline in prices, which brought them back to about the low point of the preceding year. The decline was followed by a recovery and during the second half of the year wool averaged about the same as the average of the last three years. (Fig. 1.) This indicates considerable stability. The price of wool cloth reflected the general trend of the raw material, the opening of fall lines being at the highest point in recent years. While the spring lines were opened lower, they were not so low as in 1924. (See Fig. 4.)

Consumption of raw wool by the mills was lower at the end of the year than at the beginning and in recent months has been at about the average rate of the last two years. This again indicates stability.

One of the most notable developments of the year was the regaining by worsteds of some of their former popularity. The relative activity

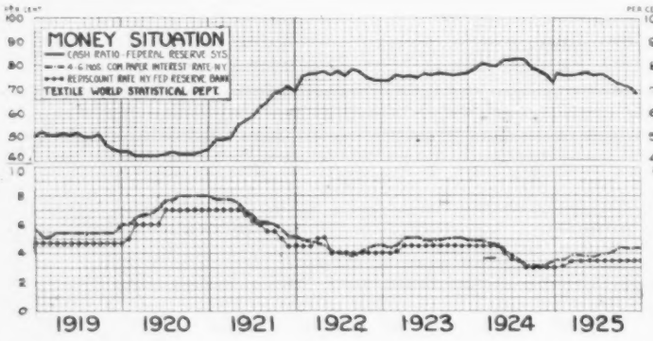


Fig. 6

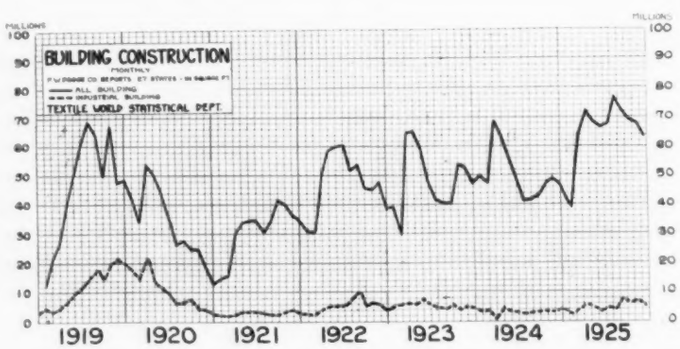


Fig. 7

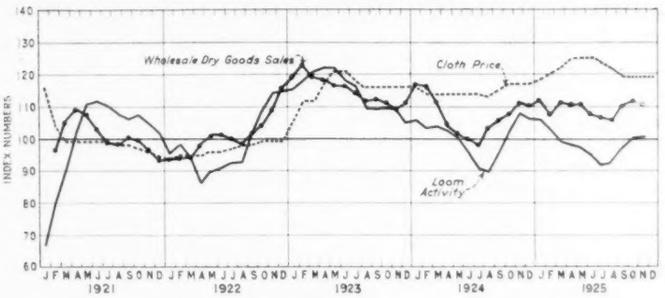


Fig. 4. WOOL CLOTH BAROMETER. Cloth price—TEXTILE WORLD indexes; 1921 = 100. Wholesale dry goods sales—Adjusted for seasonal variations; 1921 = 100; three months' moving average; Federal Reserve Board. Loom activity—Wide looms, per cent active to total; narrow looms, per cent active to total; weighted average wide and narrow; 1921 = 100 (Dept. of Commerce).

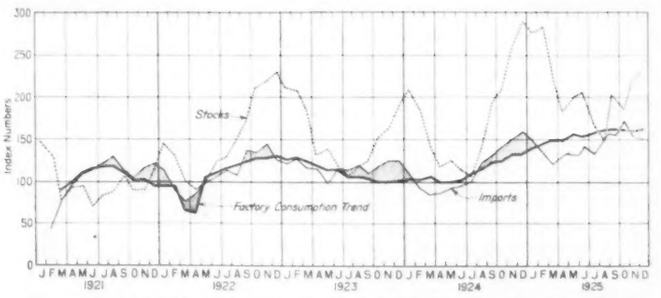


Fig. 5. STATISTICAL POSITION OF RAW SILK—Stocks of Raw Silk, Bales in storage at end of month. Avg. 1921 = 100 (Silk Association). Imports, Pounds. Avg. 1921 = 100. Three months' moving average. (Dept. of Commerce.) Last month estimated by converting each item of Silk Association figures from bales to pounds and then applying the per cent increase to preceding month. Factory Consumption Trend, Deliveries—Bales. Avg. 1921 = 100. Five months' moving average. (Silk Association.)

of wool manufacturing machinery shows that while the woolen spindles were in general on the decline, worsted spindles increased their activity materially in the second half of the year.

It was obvious throughout 1925 as in the preceding years, that the great need of the wool industry is a readjustment in prices so that wool may be brought in line with other textile materials. Wool cloth is relatively high in price, (Fig. 1) since raw wool is out of line with its normal relationship to cotton and silk.

As everyone knows, there was a large and steady expansion in silk manufacturing throughout 1925, which was reflected in record-breaking deliveries of raw silk to the mills. (Fig. 5.) Imports held large throughout the year, but failed to keep pace with consumption in the fall months, and as a result stocks of raw silk fell to an unusually low level in comparison with the requirements of the trade.

After a little decrease in March and April, the price of raw silk moved irregularly upward throughout the year (Fig. 1), but it may fairly be said that it was held to a reasonable level (between $6.80 and $6.90 for Kansai Best No. 1) and throughout the year it remained lower than at any time since 1921.—which is markedly different from the case with wool.

Nevertheless, the large production of silk textiles in the second half of 1925 has raised some question as to the possibility of further expansion. Signs were not lacking that the limit to machinery activity was near, and certainly the price of raw silk has been held down only by curtailing purchases from time to time. Some accumulation of certain qualities of silk goods is reported. The result has been that while the volume of the silk business is very large, the margin of profit on most lines has been small.

The Outlook for 1926

(1) General Business

Looking forward at the new year the prospect appears moderately good. The word "moderately" is used deliberately, as there is not the slightest indication of a boom period ahead. In most lines, the requirements of the country are not much if any greater than production and the trend of prices is uncertain and irregular (Fig. 8). But, while no boom is in prospect, it remains true that the outlook is good.

It is highly improbable if not impossible that a recession in business can develop without the appearance of important maladjustments which usually precede a crisis. At present it would be difficult to find any such maladjustments. The farm population of the country is in a better condition than it was a year ago. On the whole, farm prices are more nearly in line with the general commodity price level, and where this is not the case the crops have been so large as to offset in part the lower prices. Largely as a result of foreign loans, our export trade has been fairly good and the gradual improvement of conditions abroad, together with the prospect of a further period of large foreign loans, makes it probable that exports will continue fair for at least another year.

The general trend of money rates has been upward throughout most of the last year, (Fig. 6) but at present money and credit are easy. With commercial loans at around 4½% and time loans around 4¾%, there is nothing in the money market to retard business.

As already noted the supply of labor and of transportation is ample.

It is also notable that most of the backward industries have shown improvement and it would be hard to mention one which is not now in a better position than was the case a year ago.

But, while the outlook is good, there is little reason to expect much expansion. We are apt to call business good only when it is forging ahead rapidly and to feel disappointment when it merely holds stable, even though activity is large. There is a good deal of this feeling at the present time, but ***it is probable that as spring approaches it will be realized that with so large a volume and such freedom from maladjustments, business is "good," even though it is not booming.***

The chief dangers have already been mentioned. They lie in the possibility that our admitted capacity to overproduce will be exercised and that more goods may be manufactured than can be sold at a profit. This danger is particularly impressive because of the situation in building, the automobile industry, and the growth of the installment plan of selling goods. ***As rents gradually decline and interest rates gradually rise, it is inevitable that speculative construction of buildings will be checked.*** The saturation point in automobile sales is nearer than ever before, since the shift to the closed cars has now made so much progress. The time must come when the stimulus of sales "on time" will lose its effect. These conditions may develop at different times or at the same time; the result, however, will be similar, though different in degree. The productive machinery, geared up to satisfy the demands of rapidly expanding trade, will tend to run ahead of requirements, thus causing overproduction. This is to say nothing of the possibility that credit strain may be caused.

But, while some difficulty of this sort may be expected before 1926 is over, it should be carefully noted that no severe recession would necessarily be required. We do not think that any sharp decline in building activity is in prospect. Evidences of control of production in the automobile in-

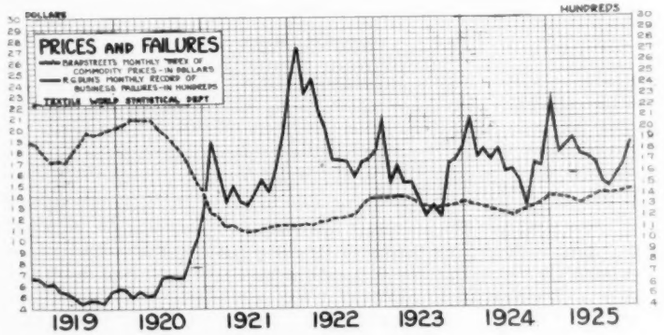


Fig. 8

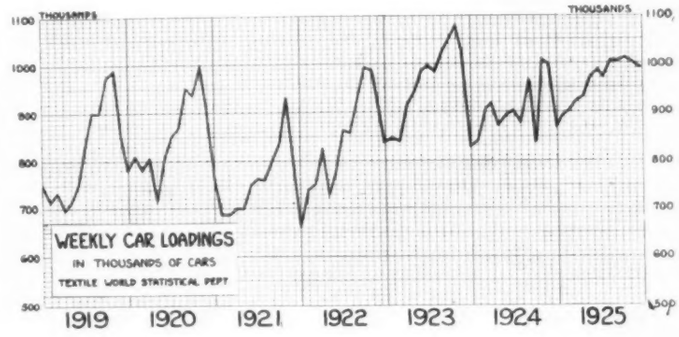


Fig. 9

dustry have not been lacking and the outlook for the export business in motor cars is very bright. Much timely warning has been given concerning the financing of installment sales and it may well be that the bankers have this situation fairly well in hand. Our point is merely that the rate of expansion based upon building, automobiles, and credit—stimulated retail trade, is likely to be checked and that production will have to be checked accordingly.

This does not mean that 1926 will be a poor year. The Analyst believes that it will be a good year, but that the second half of the year at present is rather doubtful and is likely to be somewhat poorer than the first half.

(2) The 1926 Outlook for Textiles

As the textile industry in general follows the business cycle, it is probable that there will be an initial period of dullness followed by some gains in the spring and early summer, with less favorable developments toward the end of the year. Probably 1926 will be a little better than 1925. ***It is doubtful if the volume of production in textiles will be much if any larger, but the price situation and earnings should show improvement.***

In the cotton industry we note that prices are being stablized at a reasonable level, and, being under a normal relationship with silk and wool, (Fig. 1) an expansion in sales will probably follow. Certainly the raw material is lower in comparison with cloth and yarn than it has been in a good many months,—perhaps since 1922,—which with the prospective increase in volume should mean at least moderately good profits for the manufacturer of cotton textiles. The next crop can not even be guessed at (although there is considerable talk of a reduced acreage, and increased weevil infestation), but the world outlook for cotton textiles is so favorable as to indicate that any probable cotton crop will not be too large.

It is to be hoped that the cotton mills have learned the desirability of moderation in output and will proceed with sufficient caution to insure the favorable possibilities which are now plainly possible.

As noted above, ***the great trouble in the wool manufacturing industry lies in the price of raw material.*** Wool is out of line with other textiles (Fig. 1) and the resulting high price of the manufactured product tends to discourage consumption. Wool cloth is about as low as it can be with the raw material at present levels. Now that cotton has declined to a level which encourages its use, it is probable that the weight of the ample world supply of wool will force the wool growers to modify their position. The Analyst believes that wool prices will work a little lower in 1926 and that, if its opinion proves to be justified, the manufacturers will be materially benefited. If the price of the raw material can be maintained at a basis on which worsteds can be sold in large quantity, great improvement is likely in the industry.

The silk industry appears to be at its peak. It is difficult to form any opinion as to how long it may hold its present dominant position in the textile field. There is no clear reason to believe that the volume of the silk business will not continue large for a good many months. Of course styles are fickle, and it can hardly be denied that if, as, and when fashion decrees the use of textiles other than silk for women's dresses, or suits regain their vogue, the quantity of silk textiles consumed will decrease. The Analyst has no idea when this will be, but it may be noted that (1) cotton is now relatively cheap compared with silk; (2) worsteds are gaining some ground; (3) the supply of rayon is rapidly increasing. While it is not at all probable that the use of rayon is so threatening to the silk industry as some have feared, it is probable that this new material will have a more important effect than others admit. As it becomes cheaper, more abundant and perfected, it will be increasingly substituted for silk. It can not but tend to hold the price of raw silk down. Its use in combination with cotton and worsteds will make them more effective as competitors. To the extent that the silk manufacturer uses the rayon fibre in place of the silk fibre on his looms, his business need not be affected but even that may require considerable adjustment in the industry.

We believe that the silk industry is thoroughly alive to the situation, however, and can see no reason why the necessary adjustment can not be completed without any serious difficulty.

In conclusion, the Analyst would call attention to the relative price position of textiles and other groups of products. In December, 1925, cloths and clothing as a group were nearly 20% higher than the general average of commodities (on a 1913 basis). In comparison other groups were as follows: Building materials 13% higher, fuel and light 12% higher, food less than 1% higher, metals and metal products 17% lower. Cloths and clothing, owing chiefly to the cost of the raw materials used, are relatively higher than any group of products. During the year their excess over the general average was reduced a little, but it remains true that the textile industry has much to gain by a gradual reduction in the price of fibres of all sorts.

How "Analyst" Forecast Future in 1925

Cotton Prices

Raw Cotton: In July and August the Analyst stated that raw cotton prices would show only moderate fluctuations and were not likely to go to 20c in the near future. Our position in general was that if the crop were over 14½ million bales, lower prices would result. In November we forecast a small further decline to be followed by good recovery, and in December irregularity with a slight rising trend was predicted. While somewhat under-estimating the crop, our position on the trend of prices has been substantially accurate.

Yarn and Gray Goods: In July we forecast stabilization; in August, firm to rising markets within sixty days; in October a probable setback was announced until raw cotton prices should stabilize. In November we stated that more stable cotton prices would stimulate buying and bring firmer markets. Our November forecast that yarn would probably decline in the near future, while gray goods would remain relatively weak for the remainder of the year, has proved to be substantially accurate.

Wool Prices

Raw Wool: In June we stated that raw wool was nearing the bottom and that prices would advance within three months. In September our forecast was: "No material advance in prospect; temporary slight weakness. The outlook is for stability for the rest of the year." This was followed by an October forecast of irregularity and a weaker tendency. In November we stated that the tendency would be a little higher toward the end of the year followed by weaker tendency in the spring. Our most recent forecast is for a slight general downward trend. The general position taken by the Analyst during the second half of 1925 was an anticipation of rather stable prices.

Yarn and Cloth: We forecast moderate reductions on spring lines followed by stabilization and again we have predicted reductions on fall lines. In June the Analyst predicted some weakness in the worsted yarn market and in July our forecast was for irregular and unsettled markets in the early summer, while in August we predicted moderate advances. The September forecast was for slight weakness in the near future, followed by strength in the fourth quarter. More recently we have forecast a stronger yarn market.

Silk Prices

As to raw silk, the Analyst's position in general has been that of forecasting an upward trend in the price of raw silk beginning in the fall and lasting through 1925, but that the peak would be reached in the early part of 1926. Recently we have held that while no material increase is probable, no decline is yet in sight. Our position on silk goods has not been so definite owing to the absence of a basis for forecasting, but in September we stated that rising raw silk prices would have to be reflected in somewhat higher goods quotations, which development was expected by November.

Anyone who will take the trouble to check up the various forecasts of the Analyst concerning the textile prices will find substantial accuracy in those bearing on the raw materials, cotton, wool, and silk. It may be conservatively stated that our record is at least 80% accurate in the case of wool and silk and even better in the case of cotton. We have had the least success in forecasting worsted yarns, but even here we have been well over 50% accurate.

General

General Business: In June we forecast further moderate recession, irregularity, and early stabilization; with improvement by September at the latest. In September we forecast general expansion, to last well into 1926, but with a period of moderate readjustment early in the new year.

Cotton Mill Stocks: In July, we forecast better manufacturing margins in the fall, and rising cotton mill securities. This position has been maintained since July.

Wool Mill Stocks: In July, "The bottom has been reached—a change for the better is anticipated." But in November we said that the outlook had again become less favorable. Then at the end of December we looked for recovery.

The foregoing forecasts have all been borne out, and our position on general industry and textile stocks has been at least 95% accurate.

Editors
Charles H. Cook Vernon E. Carroll
Clarence Hudson Douglas G. Woolf

EDITORIAL

We Believe
In the Conservation and Protection of Domestic Industries

Larger Earnings Forecast

A YEAR ago we ventured the prediction that the textile industry was in the upswing of a business cycle "whose price and volume peak should not be reached until well into 1926."

Excepting as modified by the fluctuations of raw material prices, over whose seasonal variations man has as little advance information as control, our forecast of that date and the more recent forecasts of the TEXTILE WORLD Analyst have proved substantially correct, and are not being modified materially at this time.

With the exception of the silk and rayon branches of the industry textile business has lagged further behind the improvement in general business than usual, and encourages the forecast that on the downswing of the general business cycle the textile lag will be equally marked.

While it is doubtful if gross textile sales for 1926 will be much larger than during 1925 there is encouragement in the forecast that price margins and earnings will show improvement.

* * *

The Rayon Age

THE rayon impetus is epochal in textile annals.

Its significance is not limited to considerations of productive increase, price tendencies or consumption outlook.

It points the way to far more fundamental possibilities. In fact it has inaugurated what may be termed the Rayon Age—rayon in this case being used to designate synthetic fibres.

There is every reason to believe that the next decade will witness revolutionary changes in the textile raw material situation. The extent and nature of these changes can not be predicted—but their probability can be forecast with almost unqualified assurance.

Primarily, this development will unfold more knowledge of cellulose chemistry than has been acquired in any ten decades in the past.

For these reasons, the Rayon Age means a new chapter in the history of textile manufacture.

* * *

Cooperative Merchandising

TEMPORARILY excessive productive capacity of certain branches of the industry, combined with style and other factors that have tended to restrict consuming demand for textiles, have concentrated chief attention of manufacturers as well as distributors upon the problems of merchandising with results that already are encouraging. Most hopeful of these results is the realization by many wholesalers, converters and cutters that the hand-to-mouth buying policy pursued by so many retailers is their opportunity for service and profit.

No less encouraging is apparently growing understanding of distributors and mill selling agents that there is an interdependence in their merchandising problems that can be met most successfully and with mutual profit by co-operative effort. This is the logical and least revolutionary method of stimulating sales, equalizing burdens, reducing cost of distribution and enhancing profits. Lacking such co-operation it is inevitable that more radical methods of cutting distribution costs would eventually be forced upon manufacturers on the one hand and retailers on the other. Honest and efficient sales co-operation cannot fail to so prove its worth as to outlast its present need.

* * *

New Mill Construction

IN THE field of mill construction during 1925 the record of 239 new mills erected approaches the average that has been maintained over a 10-year period. This shows that even in periods of severe general depression there are always sections of the textile industry that are prosperous and expanding. Many of the most important construction projects were carried out by companies that are discarding old buildings which are unsuited to the larger and more modern machinery. In the mills erected today more scope is given to the engineer, with the result that mills are better adapted to the location and form more efficient manufacturing units. The tendency toward better mill buildings has continued, the same high grade of design, construction materials and building equipment being used that have characterized new textile mill construction in recent years. The general building situation today shows sufficient interest in new construction to warrant the statement that 1926 will see a larger amount of new construction than has taken place in the last year.

* * *

Lowering Power Costs

THE greatest opportunity for the reduction of power costs in textile mills lies in extending the use of manufacturing steam for power before it passes to the processes. Power should be made the by-product of manufacturing steam wherever possible. When generated in this way it will show a larger proportionate profit than can be shown by most of the textile processes. One plant engineer in a New England mill has had remarkable success in this line. A 5,000 kw. non-condensing turbine, using steam at 150 lbs. pressure, exhausts into a 25-lb. main, and this low pressure steam is used for all the various purposes of heating, boiling and drying that are to be found in a worsted cloth mill. Some 3,800 kw. are thus generated at a cost far less than that of any public service station. Many overseers think that they cannot do their drying and other process work without live steam at a reasonably high pressure. Such prejudices against the use of exhaust and low pressure steam should be overcome, as they were in the case just cited.

Another field for the lowering of textile power costs is in the reduction or elimination of steam, light and power wastes. This campaign must be waged, not in the power plant, but out in the mill. It is the leaking steam valve, the lamps left burning, the uncovered steam pipes, and the uninsulated dryer that are causing the wastes which should be eliminated. During the war, industry learned much that could be done along this line. A backward look at the fuel records of 1916, 1917, and 1918 will show the savings of those years. Lacking the great incentive of war saving, manufacturers are relaxing their efforts in this respect. Can mills not find some peace-time incentive that will again arouse the enthusiasm of workers and cause them to resume the war-time methods of fuel savings that accomplished so much?

* * *

Research Appreciation Growing

GREAT fundamental movements progress slowly—particularly in the embryonic stage.

Consequently the absence of an industry-wide development of technical and statistical research need not discourage proponents.

The seed has been sown—and is germinating in the minds of most individuals and in the collective consciousness of practically every textile association.

At no time in the past has the need for fundamental facts been appreciated more generally by those interested in the manufacture and distribution of textiles.

The maturing of the germ in this healthy manner will bring with it a crystallization of the best thought in the industry—so that the plant, as it develops, will have the sanest and surest type of direction.

Consequently the year 1925 may be regarded as a productive one, so far as research effort is concerned.

* * *

Need for Statistics

NECESSITY for cooperation was never more completely illustrated than in the incipient efforts to obtain statistical data which are being made in certain divisions of the textile industry. Plans have been developed most extensively in the cotton manufacturing and selling field. As far as this departure has gone it has been of acknowledged benefit to those who are cooperating in the collation and distribution of these figures.

Only a start has been made in the development of a basis upon which merchandising procedure may be predicated. But this beginning confined to a percentage of the products in one particular branch of the industry has been an eye opener to those who have intimately shared in the information disclosed. It has given both manufacturers and selling agencies a better conception of the problems

which must be confronted. It also provides a potential remedy for the partial solution at least of these problems.

The cotton manufacturer who has before him details regarding production and stocks in his particular line of product has little excuse for operating his plant without regard for the economic conditions which obtain in the industry. Over-production, about which so much is heard in the textile field should become less of a bugbear as knowledge of the statistical position broadens. If a status of satisfactory profits is to be achieved strict conformity to the rules of economic procedure, based upon a knowledge of the general position of the craft will be the desideratum.

Unfortunately in this as well as in other measures for the improvement of conditions it is impossible to obtain 100 per cent cooperation by those whose interests would be best served by willingness to cooperate. Excuses for failure to work with the leaders in any campaign for betterment of an industry are always easy to find. One of the most frequently declared reasons for lack of cooperation by manufacturers in the supplying of statistics has always been of a dog-in-the-manger type. As long as the buyer will not disclose the status of his business the manufacturer will refuse to furnish figures which he fears may be used by the buyers against his best interests. We are sanguine enough to believe that when a general disposition on the part of the producer to obtain a bird'seye view of the manufacturing situation is recognized it will be possible to develop a species of cooperation which cannot help but be mutually helpful.

Difficulties encountered in securing collective data which will be of industry-wide importance and benefit have in the past been thought to be insuperable. Growth of associational activities in all branches of the trade has done much to foster the spirit of cooperation in specific divisions of the industry. As time goes on this power of cooperation from the inside should act as a leaven which will leaven the whole lump. In fact, the spread of cooperation as a principle in the industry is one of the most encouraging signs of the times as applied to the gathering and dissemination of statistics. We prophesy the day is not far distant when the relations between the seller and the buyer will become so improved that mutality of interests will lead to the most helpful form of cooperation.

* * *

"It Will Never Fade"

LACKING any immediate problem of protective legislation, the dye industry—traditionally beset with worries—turns to a puzzle worthy of its acumen.

Stated briefly, the question before the house is: "When is a dye fast—if ever?"

Elsewhere in this issue is outlined a definite plan for developing a set of fastness standards which will mean something. Possibly our readers will be able to shoot it full of holes. If so, all the better, because out of the discussion may arise some key to the solution of the fast-color guarantee problem.

Otherwise the fadeless character of dyes will depend solely upon the imagination of the advertising copy writer.

"Define Your Objective"

EACH year has its slogan in these days of gin and ginger. If we were to nominate a slogan for 1926, it would be:

"Define Your Objective"

Most of us are wandering in the dark, groping intermittently with dragons of high raw material costs, labor troubles, manufacturing difficulties, and distribution problems—tackling each opponent separately and individually to the exclusion, for the moment, of the other foes which must be met.

Is it not possible so to define the endpoint of our business activities that we might develop a program which would include all these angles?"

An ideal objective, of course, is that "almost perfect state" (to quote Don Marquis) where everything we did would be of equal benefit to ourselves, our stockholders, our operatives and our customers.

Pending the coming of such a millenium, is it not possible to develop a more perfectly balanced program which would include raw material "speculation," mill technique, industrial relations and merchandising — simultaneously and proportionately?

* * *

Enter the Customer

EXECUTIVE, operative, stockholder. This has been the personnel chain in textile manufacture.

There now enters a new individual: The customer.

A New England mill, whose story is published in this issue, has built its industrial relations around the watchword "Work for the Customer."

It's a novel thought and an extremely logical one!

* * *

Wisdom and the Ironclad Contract

THE wool goods manufacturer who is wise enough to have a weather eye on the merchandising of his product knows his goods must be sold whether raw wool goes up or down, if he is to stay in business.

That the clothier should expect manufacturers to supply him with goods on the basis of being short on the raw wool market or of passing on margins which mill stockholders have a perfect right to expect as a return on their investment, is morally unfair and economically unsound.

Mill men and their agents may profitably make a scientific study of clothing manufacture and distribution for the purpose of knowing better the problems of their customers and of developing a sense of cooperation which will some day lead the entire chain of merchants from wool grower to retail clothier out of the fog of a highly speculative business into a clearer atmosphere. Along with the effort being made to establish the sanctity of contracts must go a scientific knowledge of the needs of distribution.

An iron clad contract without merchandising helps and accurate market information might react to render the buyer even more timid than in recent seasons. The three elements together offer a brighter hope for smooth running and profitable business than the woolen industry has seen in decades.

Textile Export Opportunities

IT NEVER produces any particular patriotic thrill to compare our total of textile exports with those of Great Britain. The aggregate for 1925 is no exception and yet there is considerable that is encouraging in the record of various countries to which domestic products have been sent.

Of course shipments of cotton goods form such a large proportion of total textile exports as to make foreign business in all other divisions of the industry a negligible factor. It will be noted in a review of export markets elsewhere in this issue the increased business with South America forms the conspicuous feature. Perhaps an exception to this statement might be made in favor of China, but with many it is a grave question whether the latter country has really shown disposition or ability to purchase permanently in any larger volume than for the last few years. The shipments made during 1925 may have been in the form of speculation by shippers and may not indicate any determination to do a larger business with this country.

One factor which must be taken into consideration in any forecast of export possibilities is the increasing amount of native manufacturing that is developing in various countries. This is true of China, India and many South American countries. As the native manufacturer develops to the point where he can supply in large measure the requirements of local trade he is naturally less and less interested in foreign products. The only possible way of meeting such competition is to give increasing attention to fabrics which meet native buyers' needs more closely than many which are now being sent abroad.

The future, moreover, is dependent in large measure upon the improvement of conditions abroad. Commercial improvement has taken place in many foreign countries, but there is still considerable distance to travel before the buying capacity of these countries can be raised to a level which will mean liberal imports of merchandise. In the meantime we shall undobutedly witness an era of increasing competition on the part of such countries as England, Japan and Italy. Manufacturers in these countries are much more dependent upon export business than is this country and will go to greater extremes than will be witnessed in the domestic industry. If the American cotton manufacturer is to seek a remedy for over-expansion of productive machinery in the export field he must gird himself to meet this competition as far as profit margins will allow. Primarily, however, he must extend his knowledge of the requirements of foreign buyers and be willing to effect such changes in equipment and in the character of his product as will make his offerings tempting to the buyer who has his individual reasons for demanding peculiar types of merchandise.

The export market is nothing but the domestic market once removed, while the desirability and necessity of adapting manufacturing and merchandising methods to the needs of the home buyer are just as important if not more so when developing over-seas trade.

Why We Must Have a Reserve of Cotton

Imperative if We Are to Keep Supplies at an Adequate Level—Would Stabilize Prices for Grower and Spinner and Discourage Gambling in Futures—Great Britain Hard Hit Industrially but Far From "Down and Out"

By Sir Charles W. Macara, Bart.

THE editor of TEXTILE WORLD, in requesting me to contribute again to his Annual Review Number, threw out a suggestion that I might, in view of the unusually large cotton crop of the past season and the comparative slackness in which the raw material is being taken up by spinners owing to the temporary reduction in the world demand for manufactured goods, consider the present an opportune time to revive my plea for the storing of surplus stocks of cotton in years of plenty against the years of smaller crops that almost invariably follow. He calls attention to the fact that we are faced with relatively large world crops of cotton and with threats in America, Egypt and India of organised reduction of acreage next season, and adds:—"Possibly you have changed your views as to the feasibility of accumulating reserves through co-operative effort, but I feel certain that you still hold to the principle involved, and I also feel that a statement from you on the subject will go far towards influencing a majority of world spinners to adopt the right policy."

The subject suggested by the editor is an excellent one, none could be better from the point of view of every interest involved. Moreover, I can assure him that I stand exactly where I did on this supremely important question. It is a cause I have again and again championed since I made my pronouncement at the Atlanta Conference in 1907, and I have had since that time incontestable proof that the proposal I then made was an absolutely sound one. The subject had passed the academic stage when I was at Atlanta, but what happened after the Great War put the utility and justice of the matter beyond all doubt.

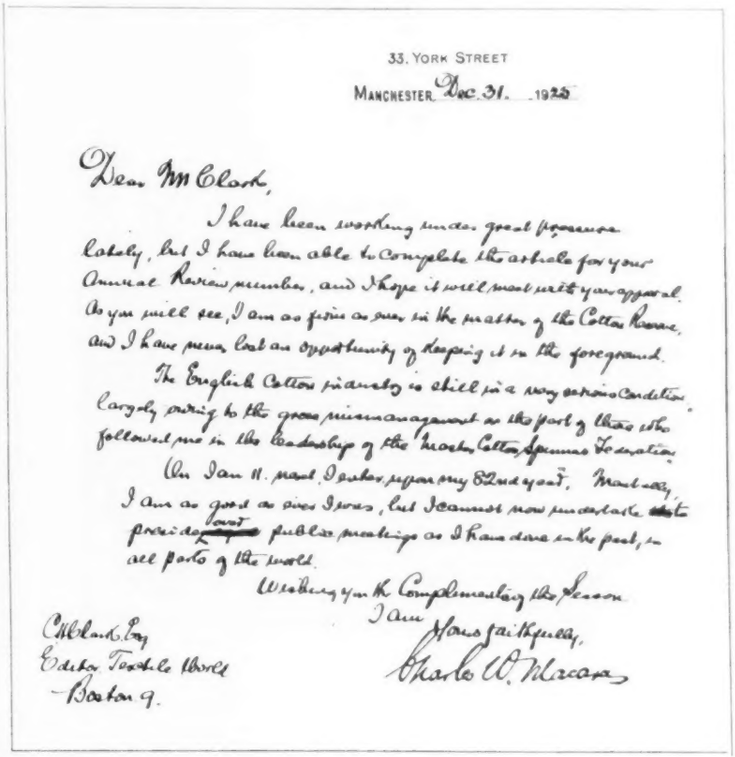
Atlanta Pronouncement

At Atlanta, I laid down certain broad principles of working which are as true to-day as they were on the day they were uttered. I stated that an organization such as the International Cotton Federation could not be successful unless it paid due regard to the legitimate interests of all engaged in the industry, whether they were the growers of the raw material, the legitimate middlemen who were responsible for the distribution of that raw material, the spinners, the manufacturers, or any of the other interests dependent upon them. I then went on to say how important it was in the interests of the cotton industry as a whole that the price of the raw material should not be reduced to a level at which growers would not be remunerated adequately, and added:

"We shall certainly have, as in the past, bad seasons alternating with good, but as cotton, unlike most other agricultural produce, can be stored for years without deterioration, it would surely be wise and prudent, in times of over-abundance, to establish a reserve for years of partial failure, which would also have a steadying effect on prices.

"I should like to emphasize that taking into consideration the magnitude of the interests involved, the risks to which the cotton plant is exposed, and the prospects of the continued development of the world's cotton industry, we should be short-sighted indeed if we did not take energetic measures to increase our supply of the raw material, to broaden the base of that supply, and likewise give attention to the establishment of a reserve in years of abundance as an insurance against years of partial failure and all the suffering which this entails. I quite appreciate the great difficulties which surround the creation of a reserve, but when difficulties are resolutely faced, it is wonderful how they can be overcome."

We did not come to any practical conclusion on this question at the Atlanta Conference, being too much occupied with matters affecting the growing and handling of the cotton, but I have never missed an opportunity, since that time, of pressing forward the subject, and I am glad to know that the seed has not fallen upon barren ground. As showing how deeply interested I was in it, I may say that it was my advocacy of the principle of creating a reserve of cotton that led to my resignation of the Presidency of the Federation of Master Cotton Spinners' Associations, a position I had held for 21 years, and the International Cotton Federation, for whose establishment I was largely responsible, and over whose deliberations I presided for 11 years. Let me add, with all the emphasis of which I am capable, that the rejection of my advice on this question at the beginning of the war has, directly or indirectly, been largely responsible for the trials and difficulties the cotton trade has passed through during and since the war period. There could not, therefore, have been any subject suggested for consideration in the pages of TEXTILE WORLD upon which I have thought more deeply or felt more strongly.



33, YORK STREET
MANCHESTER, Dec. 31. 1925

Dear Mr Clark,

I have been suffering under great pressure lately, but I have been able to complete the article for your Annual Review number, and I hope it will meet with your approval. As you will see, I am as firm as ever in the matter of the Cotton Reserve, and I have seen that an opportunity of keeping it in the foreground.

The English Cotton industry is still in a very serious condition largely owing to the gross mismanagement on the part of those who followed me in the leadership of the Master Cotton Spinners Federation.

On Jan 11. next I enter upon my 82nd year. Mentally I am as good as ever I was, but I cannot now undertake that previous ~~[illegible]~~ public speakings as I have done in the past, in all parts of the world.

Wishing you & Compliments of the Season
I am
Yours faithfully,
Charles W. Macara

C. H. Clark Esq
Editor Textile World
Boston 9.

A Great Opportunity Missed

I could not do better for the purpose of recommending the policy of reserving cotton, perhaps, than recall the blunders into which our selfishness and cynical disregard for other people's welfare led us at the outbreak of the war, and point out how acutely spinners have since suffered for their selfishness and short-sightedness. It may be recalled that in the first year of the war America raised the largest crop of cotton ever known (probably 17,500,000 bales, though given officially as 16,738,000 bales) and this coming at a time when there was a great reduction in demand owing to enemy countries being out of the market, we were faced with a great glut of the raw material. Seeing this, and knowing that we should, as spinners, make a huge mistake if we allowed the cotton to be thrown on the market at ruinous prices, I suggested that America and England, the two preponderating factors in the growing and manufacturing of cotton, should purchase this surplus, and thus prevent a disastrous loss and also secure a reserve of cotton. This, I pointed out, would not only stave off ruin to the planter, but would be of inestimable benefit to the industry generally. I suggested, also, that this course might be taken in other parts of the world where cotton was grown, and Egypt and India adopted it.

America and England, however, refused to look at the scheme, the spinners of both countries taking up the attitude that they had a perfect right to take advantage of the market under these conditions. The logic, of course, was altogether unsound, for the reason that the spinner spins cotton only, while the planter, if cotton ceases to be a paying proposition, can turn his land on to other crops. I used my utmost endeavour to study the interests of the planter, but the Master Cotton Spinners' Federation, opposed the proposition and passed a resolution limiting my freedom of action. The result was that I resigned my presidency, and have refused to take any official position since.

Cotton Acreage Restriction

Through refusing to take the advice of one who had had exceptional opportunities, American cotton fell from 7½d to 4d a pound, and the spinner, no doubt, considered that he had done a very fine thing for himself to get cotton at a price long below the cost of production. But he displayed great want of vision. The planter, who had been brought to the verge of ruin (indeed, many were actually ruined) proceeded immediately to restrict his acreage for growing cotton. Had my proposition for creating a reserve of cotton been adopted, it would not only have saved enormous loss—cotton being a commodity which, if properly packed, can be stored for years without deterioration—but

would have done much more. After supplying neutral countries with their ordinary requirements as shown by the statistics which had been supplied to the International Federation for many years, we could have stopped the flow of cotton into enemy countries, and, as cotton is an indispensable ingredient in the manufacture of explosives, we could have shortened the war considerably, have saved many thousands of lives, and hundreds of millions of treasure.

In the season following that of the record crop, the number of acres harvested fell from 36,832,000 to 31,412,000, and the number of bales from 17,500,000, to 12,013,000, remaining at or under the 12,000,000 bales level for the next four or five years, and then they fell further, the crop in 1921-1922 being only 8,360,000 bales. A short supply and consequently high-priced cotton came at the moment when the cotton trade was in the throes of a slump, and until 1924 spinners called in vain for relief. Then the American planters aroused themselves, but not so much in the interests of the spinner, one may presume, as out of alarm at the way in which cotton growing in other countries was increasing.

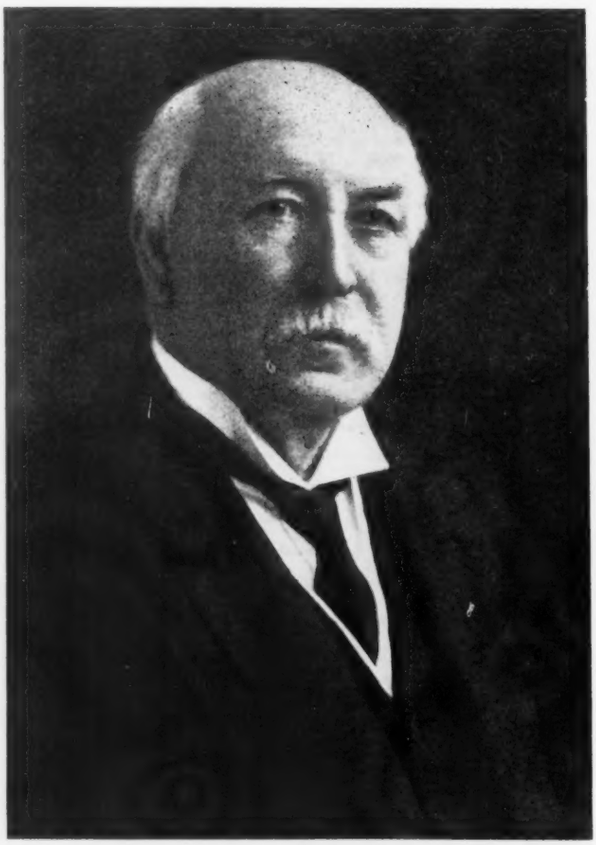
Must Remunerate the Grower

It must not be supposed that we have reached again a position when we can afford to neglect the interests of the growers of our raw material. If the price of cotton is brought down to too low a figure to remunerate the grower in America, we shall not only find him resuming his restriction policy, but we shall discover that the enthusiasm of the growers in Africa, India, Brazil and elsewhere has waned, for there is no doubt that the spurt in cotton-growing all over the world has been influenced much more by the high prices of the raw material that have ruled for a year or two back, than by consideration of the spinners of England or any other country. Our safety is to be found in remunerating the grower in accordance with the changed conditions that have obtained as a result of the world upheaval. At the moment, the price of Middling American cotton is standing at 10d which is only about 2½d more than it was pre-war. The world's cotton mill stocks of all classes of cotton, according to the International Cotton Federation's figures (regardless of weight) rose from 3,569,000 bales on July 31, 1924, to 4,267,000 bales on July 31, 1925.

The carry-over at the end of the 1925-1926 season is likely to be considerably larger than it was last year in view of the poor trade we are having at present, and thus it is that we come again to the question of whether or not it would not be well if we took some means of securing a surplus of cotton in order to make provision for lean times and to steady prices.

Stability Most Important

People scarcely realize what it would mean to the trade to get the raw material on to a steady basis and keep it there. We in Manchester have had a telling object lesson during the past three months, when despite the fact that cotton has fallen about fourpence a pound, there has been great difficulty in getting buyers to enter into contracts for cotton goods beyond immediate needs. The erratic methods of the Crop Reporting Board, coupled with the freakish ways of the cotton exchanges, have made it impossible for buyers to have any faith in raw material prices, and the result has been that despite the great reduction in the price of the raw material and the fact that the markets of the world are bare of cotton goods, confidence has been so shaken that a hand-to-mouth policy obtains. What we want is stability,



Sir Charles Macara, Bart.

and we want that even more than low prices. I contend that the way to bring about this stability would be to create the reserve of cotton I have for so long recommended.

Ousting the Cotton Gambler

At the International Conference at Atlanta in 1907 to which I have referred, there was one question which occupied the minds of the delegates, and particularly of the planters, almost to the exclusion of everything else. I refer to the elimination of the cotton gambler, whose activities, Mr. Hoover stated recently, were responsible for the adding of about one-third to the price of the raw material. The Hon. J. Thomas Heflin, of Alabama, I remember, was particularly strong on this question in the planter's interest. "It is for Congress to assist the States in putting the cotton gamblers out of business," he said. "The producer must be relieved of the outrageous and destructive competition to which he is now subjected by the speculator, who offers upon the Exchange a fictitious product which he cannot and does not intend to deliver. These gambling Exchanges buy and sell a fictitious product, and the price that they fix determines the price of the entire cotton crop. This obnoxious method deprives the farmer of his right to a voice in fixing the price of this important product—a right which is accorded to other producers."

Mr. Heflin went on to say that if a man offered a horse for a hundred dollars and did not own the horse, he would be obtaining money under false pretences and would be clapped in gaol, and yet Congress permitted the cotton gambler to offer for sale something that he did not own and never expected to own, and which the man buying did not want, and through this evil performance the real product upon which millions of people were dependent for a livelihood was injuriously affected. With all of this I cordially agree with Mr. Heflin. The cotton gambler is, as he said, a curse to the whole industry, and the creation of a reserve of cotton would, I am convinced, put the gambler out of business even more surely than Congress itself. The fact that there was a reserve of cotton ready to be thrown on the market, whenever it was found that wild speculation was running up prices, would make the gambler, professional or amateur, think twice before he entered into his irresponsible dealings, while such a thing as making a "corner" in the raw material would be impossible.

Incidentally, I should like to express a hope that America has taken note of what is on foot in India with regard to putting down the cotton gambler. The Bengal Chamber of Commerce has recently made a recommendation to the Legislature that every raw cotton contract entered into should be enforceable at law, and that those transactions in which delivery would not be given, or taken, or contemplated, should be prohibited or made null and void. Such legislation as is proposed in India, I take it, would not affect dealings in "futures" by those legitimately engaged in the trade. The recommendation is, no doubt, directed towards the outside gambler, the man who toils not neither does he spin.

It is difficult to see how we could get along without a futures market in an industry so huge as cotton, although one is aware that the woolen trade does not find it necessary to do business on these lines. Few Lancashire cotton mills could afford to put down spot cash for the great quantities of cotton they consume, but it would be all to the good if it could be arranged that such futures dealings as do take place should have a backing of actual cotton in the warehouse. If we had the reserve of cotton I propose and in addition called for a high-priced stamp to be affixed to every cotton contract (the amount the stamp represented being refunded when the cotton was taken up and forfeited when it was found that the transaction was a pure gamble) we should make doubly sure of eliminating the illegitimate speculator.

Other Cotton Fields Necessary

What I have said above as to the necessity of reserving cotton should not, I think, be taken as having reference to American cotton only. It is obvious that if we are to make a success of the scheme there can be no loopholes, and all classes of cotton would have to be taken into consideration. America at the moment may not consider that other cotton fields are worthy of much notice, but they are coming, and must come if we who are engaged in the spinning and manufacture of cotton are to face the future with any degree of confidence. The Southern States of America may at the moment feel that they have produced too much, but on the other hand it has to be pointed out that a crop which sometimes varies as much as 4,000,000 or 5,000,000 bales from one year to another cannot be relied upon too implicitly. Without the slightest feeling of hostility to America, we are bound to encourage other supplies, and, if for no other reason than to have the means at hand to frustrate the cotton gambler.

But there are other and very cogent reasons why we should have alternative sources of supply. First of all, it is common prudence not to put all one's eggs in one basket, and, again, we must not assume that the cotton

(*Continued on page 259*)

Rayon Sets New Record—Promises More Thrills

Production of Over 52,000,000 Lbs. in United States During 1925 Overshadowed by Possibilities of Radical Developments in Synthetic Fibre Field Still to Come—Imports Increase Notably—Details of Individual Domestic Companies—Price and Market Tendencies

By Douglas G. Woolf

FOR years, the writer has regarded the statistical position of rayon production as the most vitally important factor in any annual review of developments.

This year he feels inclined to subordinate this retrospect to the prospect. This inclination is not due to any lack of 1925 material. Producing, as we did, over 52,000,000 lbs. of rayon last year, or an increase of approximately 35% over 1924, the twelve months just closed represented one of the epochal periods in rayon manufacture.

But the possibilities of the future are far more staggering than the past, thrilling though it has been.

The writer is not going to make any definite predictions. He is too "cagey" for that. But he *is* going to put himself on record as prepared for anything which may develop in the future, no matter how revolutionary it may be.

Rayon has been referred to as an infant among textile fibres. And it is still an infant. Its history, in large part, has not as yet been written.

Comparison with Dyes

By rayon, in this connection, we mean the synthetic fibre industry. Not so long ago, we casually compared this artificial silk development with the synthetic dye development of a half century or more ago. We pointed out that anyone who, in 1860, might have dared to predict the replacement of natural dyes, almost in toto, by man-made dyes, would have been regarded as crazy; and that the man who today predicts similar developments in textile fibres, is open to the same charge. But may not the 1926 theorist prove eventually to be as sane as his 1860 prototype?

The success of synthetic dyes—at least at the start—was not due to any fastness superiority. In fact, for many years, they had to combat the opprobium of the name "aniline dyes" which meant just one thing to the man-in-the-street: Fugitiveness. Their gradual acceptance was due largely to the one quality of uniformity. It soon became evident that a product made by man could be reproduced time and again without variation. This has never been—and can never be—true of a natural commodity.

It seems logical that this one characteristic may be as potent in the increased acceptance of synthetic fibres as it was in the dye development.

Add to this the possibilities of price control and gradual adaptation of the product to new uses—and the sum total represents at least an excuse for the enthusiasm of the writer.

Possibilities of New Fibres

He happens to be of the opinion that there is almost no limit to the extent to which a research chemist, working in conjunction with a research engineer, may eventually mould the product of a chemical solution—and control the strength, physical characteristics, appearance and spinnability of the resulting fibre.

The case of Sniafil, or "artificial wool," is a pertinent example. The writer does not know just how important this particular fibre may prove to be. He does know, however, that it is extremely important as pointing the way to potential developments in the future. From the same viscose solution as provides the lustrous rayon, comes this short, non-lustrous wooly-looking fibre which is now engaging the experimental attention of wool spinners here and abroad.

What next? Who knows? We do know, however, that the costs of producing rayon are being lowered steadily—and will be lowered more in the future. We know also that the rayon impetus has created a financial situation which promises reward for research undertaken.

This is an important point. Many real industrial developments have smoldered under the surface for years, because there was no prospect of financial return; and then suddenly have burst into flame as market tendencies encouraged the investment of capital.

The rayon industry is feeling the effect of such an impetus today—and is capitalizing on it.

Fields to Conquer

And what a promising field for investigation!

Wander among rayon manufacturers, as has the writer, and talk with expert technicians on questions concerning the actual production of rayon. Note the conflicting opinions you can get on the questions of cotton linters vs. wood-pulp; spool-spinning versus pot-spinning; spool-washing vs. skein-washing—and a dozen or more other controversial subjects. And then you will realize that there is still much to be learned *definitely* on these and other points.

But, more basic than that, dip into the field of cellulose chemistry and find out how much fundamental research is still to be done in this direction. Then consider the effect of the rayon development upon this research.

Next consider the eventual possibilities of a synthetic fibre in competition with cotton. Is it not conceivable, as suggested to the writer, that a yarn might be produced some day which would compete successfully with combed, gassed or mercerized cotton yarns of medium or coarse count—and possibly of counts up to 80s—spun from long staple cotton such as Egyptian Sakelaridis, domestic Pima and Sea Island—and from the longer staple Delta cotton.

With constantly lower production costs, a synthetic fibre made for strength and evenness—and not for luster—might be produced cheaply enough to become a very serious competitor.

This same authority estimates that there is a present market in this country for not far from 100,000,000 lbs. of such a fibre in counts up to and including 60s-2 ply cotton count. Even if this estimate were halved or quartered, it would still offer an attractive outlet for the product of many of the proposed rayon plants, should the demand for a lustrous fibre slacken.

Still another possibility mentioned to the writer is that some day the viscose solution may be sold ready for the spinnerettes, delivered in drums and of standard and controlled character—the purchaser's equipment being limited to that used for spinning and winding.

This seems rather remote, first because the viscose solution is a colloidal one and not particularly stable, and second because the ultimate purification of the regenerated cellulose types presents problems which must be added to the job of merely spinning and winding.

However, any of these "dreams" will not be laughed aside too hastily by those possessing a proper respect for the chemist-engineer combination referred to above.

Finally, consider the possibilities of economy in the final handling of rayon. Much of it is put into skein form, at considerable expense, by rayon manufacturers—only to be transferred into another form of package, at more expense by the purchaser. In many rayon plants, the skein form is absolutely essential for the washing and bleaching operations—but this is true in 1926; how about 1927 or 1930 or some other year?

Pressing Problems

At any rate we are facing an era whose possibilities stretch the imagination to the breaking point. And this future carries with it many interesting problems—some of an immediately pressing nature.

If, as seems probable, the production of rayon faces the possibility of many radical changes, what type of manufacturing unit is going to survive? Will it not be the organization possessing the financial and technical ability to keep up with this procession—and possibly a jump or two ahead?

To the writer, this represents another and particularly forceful argument against small and financially weak units. He has preached against them consistently for several years, because he had set a strict desideratum of capital and technique—and

DOMESTIC RAYON PRODUCTION STATISTICS

The following table represents TEXTILE WORLD'S annual survey of domestic rayon production, by companies, for the year just closed and estimate of probable output during the coming year. It lists only those firms which were important commercial factors in 1925. Probably other plants will come into large-scale operation sometime during 1926 but their plans are not sufficiently definite to permit inclusion of actual estimate of poundage to be produced.

	1925 Lbs.	*1926 Lbs.
The Viscose Co.	35,000,000	40,000,000
Du Pont Rayon Co.	6,761,560	14,500,000
Tubize Artificial Silk Co.	5,200,000	6,000,000
Industrial Rayon Corp.	2,250,000	3,500,000
American Cellulose & Chem. Mfg. Co.	1,500,000	3,500,000
Belamose Corp.	675,000	†1,000,000
Acme Artificial Silk Co.	322,665	540,000
Other firms	500,000	1,000,000
Total	52,209,225	70,040,000

* Estimated.

† Will range from 1,000,000 to 1,500,000.

felt that anyone starting with less than this quota was courting immediate financial loss. Now, he feels that even those organizations which may weather the storm, owing to favorable market conditions, face an inevitable day of reckoning.

To get down to cases, rayon is selling today at $1.90 per lb. for the 150 denier. It could be sold somewhat cheaper.

The margin of profit is going to be reduced slowly. Maybe not this year—or next—but eventually. We have said this before—and repeat it even more emphatically. And the rayon plant is going to make less and less on its investment.

But that's less than half the story. How can a small unit, with say one chemist, keep pace with the revolutionary changes facing us? May not its executives awake some morning to find an entirely new rayon industry in the making—and realize that their plant is valuable only as scrap?

At any rate, think of this: One of the large rayon manufacturers has taken out 1,000 to 1,500 patents in the last five years. Do you know what that means—and what it *can* mean?

Neither you nor I nor anyone knows whether the viscose process is the last word in rayon manufacture. Nor do we know what this Sniafil movement means—not so much so far as this one particular fibre is concerned but as a portent of possible developments in the whole synthetic fibre field.

And so, as we don't know, it behooves us to keep awake.

And here's a final warning:

Even if equipment standardization makes it increasingly easy for small rayon units to prosper, possibilities of future change make it increasingly unlikely that such prosperity can be anything but temporary.

1925 Rayon Production

Having disposed of the future, we shall get back to the past.

As was anticipated, the year 1925 set a new record in domestic rayon production. The accompanying box summarizes TEXTILE WORLD's survey, covering those companies whose output during the year was on a commercial basis and affects the total materially. It is interesting to note that the quantity actually produced, namely, 52,209,225 lbs., was very close to the figure estimated by TEXTILE WORLD in its Rayon Supplement, published Sept. 26, 1925. The fact that it fell slightly below that prediction was to be expected, as there is usually a natural tendency on the part of manufacturers to overestimate, rather than under-estimate, future production. Similarly, the revised estimate for 1926, namely 70,040,000 lbs., is slightly under that published in September, as certain of the companies find that their programs of construction or expansion will not reach completion as early as anticipated.

Just how much this 1926 estimate will be increased by the output of new units which will get into operation during the year is problematical. It is almost impossible for a manufacturer to set a definite date when he can expect initial commercial production. There are too many variables concerned. However, it is probable that this accretion will not affect the total materially. There are many projects under way which will reach the commercial stage late in the year or early in 1927 which will affect the latter period's production more than that of the current year.

Individual Rayon Companies

The following brief survey presents 1925 developments and 1926 plans of the individual rayon firms in this country.

Acme Artificial Silk Co., Cleveland, O. Viscose process. Operating on basis of 1200 lbs. daily at end of year. Now increasing capacity and planning for further expansion.

American Bemberg Corp., Johnson City, Tennessee. Cupro-ammonium process. Organized last summer as result of merging agreement between Glanzstoff and Bemberg, both of Germany. Plant should be in operation in latter part of 1926 and, when run at full capacity, will produce about 2,000,000 lbs. annually.

American Cellulose & Chemical Mfg. Co., Amcelle, Md. Acetate process. Got into successful operation early in 1925. Expects to produce 3,500,000 lbs. of Celanese in 1926.

Belamose Corp., Rocky Hill, Conn., Viscose process. Got into successful operation in 1925. Expects to produce 1,000,000 to 1,500,000 lbs. in 1926.

Chemical City Rayon Corp., St. Clair, Mich. Viscose process. Hopes to have plant in operation latter part of 1926. Initial unit to produce 1,000 lbs. daily.

Du Pont Rayon Co., Buffalo, N. Y. and Old Hickory, Tenn. Viscose process. Important expansion plans laid out and partly completed in 1925 mean eventual production of over 20,000,000 lbs. Old Hickory plant got into operation in 1925 and increasing output rapidly. Expect to produce between 14 and 15 million pounds at two plants combined in 1926.

Jas. P. Hooper Mfg. Co., Baltimore, Md. Viscose process. Hope to get into operation some time in the near future.

Industrial Rayon Corp., with plant at Cleveland, O. Viscose process. This company organized in summer of 1925 to acquire stock of Industrial Fibre Corp. of America. Expansion program at plant just completed, bringing basis to over 12,000 lbs. daily.

International Rayon Corp., Elmira, N. Y. Viscose process. Organized in fall of 1925. Plant, which should get into operation later in 1926, will have an initial capacity of 5,500 lbs. of 150 denier rayon.

Klis Rayon Corp. of America, Canton, Mass. Viscose process. Organized in 1925 to acquire machinery of Founder's Silk Syndicate at Canton. Plans call for plant with ultimate capacity of 2,000,000 lbs., annually—one-third of equipment to be installed at start.

Lyons Artificial Silk Co., Inc., Sellersville, Pa. Viscose process. Have been manufacturing mostly artificial horse hair but selected site at Pennsville, N. J., on which they plan to erect rayon plant with capacity of 5,000 lbs. daily.

Lustron Co., South Boston, Mass. Acetate process. Not planning any expansion at present.

Napon Rayon Corp., Clifton, N. J. Cupro-ammonium process. Organized in fall of 1925 by Atlas Powder Co. to acquire plant of Cupra, Inc. Installing equipment for daily capacity of 1,500 lbs. at start, and later to expand to 6,000 lbs. Should be in operation some time in 1926.

Pacific Cellulose Co., Inc., Walnut Creek, Cal. Nitro-cellulose process. No information available regarding plans.

Rayon Silk Co. of America, Chester, Pa. Cupro-ammonium process. Took over former plant of Cellulose Silk Co. of America.

Skenandoa Rayon Corp., Utica, N. Y. Viscose process. Organized in fall of 1925. Acquired property of Skenandoa Cotton Co. Installing equipment for initial output of 2,500 lbs. daily, later to be increased to 10,000 lbs. Should be in operation sometime in 1926.

Viscose Co., Marcus Hook, Pa., Roanoke, Va., Lewiston, Pa., and Parkersburg, W. Va., Viscose process. Acquired land at Parkersburg, W. Va., in summer of 1925 and proceeding with erection of plant to produce 10,000,000 lbs. annually. Its completion, plus conclusion of expansion at other plants, will bring total capacity to approximately 56,000,000 lbs. annually. Expect to produce 40,000,000 lbs. in 1926.

Rayon Yarn Imports

The following figures show imports of rayon "yarns, threads and filaments" into the United States, month by month, during 1925 and comparisons with 1924, from figures compiled by the U. S. Department of Commerce:

	1924 *Lbs.*	*1925* *Lbs.*
January	251,951	205,627
February	132,717	619,408
March	87,430	522,139
April	89,444	431,686
May	96,555	332,737
June	144,664	308,592
July	78,050	546,695
August	119,196	590,357
September	181,614	622,304
October	170,120	825,223
November	170,238	1,118,679
December	190,008	877,064
Total	1,711,987	7,000,521

It is significant to note the remarkable increase in imports over 1924, particularly during the latter months of the year. This developed in the face of rapidly increasing production in this country.

Waste and Waste Yarn Imports

The following table shows imports of rayon "waste and yarns made from waste," month by month, during the year 1925 compared with 1924:

	1924 *Lbs.*	*1925* *Lbs.*
January	317,021	703,987
February	395,369	581,199
March	256,269	474,928
April	264,771	419,627
May	416,638	403,639
June	287,871	271,430
July	251,405	169,128
August	255,172	320,440
September	643,005	574,919
October	819,590	610,419
November	697,617	538,718
December	811,811	410,928
Total	5,416,539	5,528,392

Rayon Exports

At the first of last year, a new item was included in the foreign trade reports of the Department of Commerce, namely, exports of rayon yarn. These have been comparatively insignificant but, as pointed out previously by the writer, there is every probability that this phase will broaden in the years to come. The 1925 figures follow:

	1925 *Lbs.*
January	2,744
February	8,430
March	19,335
April	10,028
May	46,628
June	2,872
July	3,081
August	5,395
September	7,801
October	8,587
November	10,658
December	22,389
Total	147,948

Uses by Industries

In the absence of cooperative statistics for the entire rayon industry, we print below the figures compiled by The Viscose Co., showing percentage production of its product, by industries, for the last three years:

	Per Cent		
	1925	1924	1923
Hosiery	28	23	22
Cotton goods	26	15	11
Silk goods	16	18	15
Underwear	13	11	5
Knit outerwear	5	14	25
Braids	4	8	10
Tapestry	4	3	..
Upholstery	..	..	2
Plush	1	2	2
Woolen goods	1	1	1
Lace	1	..	..
Webbing	1	..	..
Miscellaneous	..	5	7

Price Outlook

Finally, to complete this picture of rayon in 1925, the following summary of TEXTILE WORLD's editorial opinion on the price outlook is re-printed:

1. It is probable that the tendency for the broad future will be toward lower rather than higher rayon prices.

2. It is unlikely that this tendency will at any time resemble a sharp break but will rather take the form of slow-stage declines as the above factors make themselves felt.

3. As far as the immediate future is concerned, there seems to be every reason to anticipate maintenance of primary prices for the first half of 1926; in fact TEXTILE WORLD would hazard the guess that the firmness may be expected during most of next year. Many of the new units now projected will not get into operation before the early part of 1927 and some will be much later than this.

Rayon Developments in Great Britain

Survey of the Field Shows a Few Large Firms Controlling the Situation Now With a Number of Others Expected to Get Into Operation in 1926—Import Duties and Their Effect Upon the Market—1925 Production Estimated at 32,000,000 Lbs.

By J. Guthrie Oliver

(Prepared Exclusively for TEXTILE WORLD)

THE history of the British rayon industry for many years was to a large extent the history of the firm of of Courtaulds Ltd. From a small beginning in 1904, this firm has increased its productive capacity to such an extent that its plants are now situated at Braintree, near London; Coventry and Wolverhampton in the Midland Counties; and at Flint, Leigh and Droylsden, in close proximity to the Lancashire and Yorkshire cotton and woolen industries. The ramifications of Courtaulds Ltd. and of their allied firm, The Viscose Co. in America, extend far beyond the boundaries of these countries.

The success which has attended the efforts of Courtaulds Ltd. has been one of the main contributory causes of the recent succession of new flotations which does not appear to have yet exhausted itself and to which further reference will be made later. Before dealing with this side of the subject however it will be useful to note the companies at present actually producing in England and as details of these are more or less known, only brief reference will be made.

Individual Firms

British Celanese Ltd. has a factory at Spondon in Derbyshire where the cellulose-acetate process is used. There is an undoubted future for the products of this company, in a specialized field.

Harbens Viscose Co., which is a subsidiary of a well-known Manchester textile firm, has established a factory at Golborne in Lancashire where the viscose process is used.

Brysilka Ltd., is the only firm in this country using the cuprammonium process. The factory is in Yorkshire.

The only nitro-cellulose plant is at Stowmarket in Suffolk and is operated by *Bulmer Rayon Co.,* a subsidiary of an important Yorkshire woolen firm to whom further reference will be made later.

At the present time the whole of the country's production, with possibly one or two minor exceptions, comes from these companies, the contribution of Courtaulds Ltd. being estimated at from 80 to 95% of the whole.

The total British production has, in common with other countries, risen enormously. In 1922 the total output was 15,000,000 lbs. In 1923 this was only slightly exceeded but a 50% increase in 1924 brought the figure up to 24,000,000 lbs. For the year 1925 the most reliable estimate is 32,000,000 lbs. and it is obvious from present developments that this figure will be exceeded by a considerable margin in the present year.

The application in July, 1925, of a customs duty upon rayon on the following scale, resulted in a very large decrease in imports and encouraged both new English companies and the subsidiaries of foreign firms to commence manufacture here. These duties are:

British Import Taxes.

	Duty per lb.
Singles yarn	two shillings
Double-twisted yarn	three shillings
Tissues	three shillings and six pence

Subject to certain draw-back rates on exports.

Made-up goods, 33⅓% on value of the article where value of rayon exceeds 20% of total cost.
10% when percentage of rayon between 5% and 20%.
2% when percentage of rayon under 5%.

These duties, which amount to approximately 32%, were an entirely new innovation and met with a mixed reception from a large body of manufacturers in Lancashire who regard the free trade policy of this country as the backbone of our commercial success. It is early yet to venture any forecast as to the final result but quite apart from the question of revenue, a few salient facts may be quoted.

Rayon Imports

Total imports of rayon yarn into Great Britain during 1925, were:

Jan., Feb. and Mar.	£1,597,003
Apr., May and June	3,719,146
July, Aug. and Sept.	796,686
Oct.	266,360
Nov.	255,279

That the same activity in the promotion of new rayon companies, under way in this country, is also noted in England has been well recognized by the domestic industry. The accompanying article, prepared in England for TEXTILE WORLD, analyzes the situation and presents facts regarding the individual firms now in operation or projected.

The figures for the last two months include all classes of rayon. The duties were proposed in April and came into force in July. From the table given it will be seen that excessive "dumping" took place in the second quarter of the year and that immediately after the application of the duties, imports began to fall off, the decrease being continuous and not merely the result of a previous excess.

The effect upon other countries has not yet been reduced to figures except in some cases and these are not all obtainable in this country. In regard to Germany however, we have some definite information. During the first ten months of 1925 which included four months under the new duties, Great Britain was Germany's chief export market receiving 795 tons out of a total export of 3288 tons. In October 1925 Great Britain was almost the lowest in the export tables, taking only 14 tons out of a total of 465 tons. In view of the fact that Germany's total export of rayon was 30% higher in October 1925 as compared with October 1924, there is little reason to doubt the effect of the English duties.

In the case of Italy, where British imports had increased from 2,461,106 lbs. in 1923 to 4,450,552 lbs. in 1924, the position for 1925 is not fully known, but from the fact that imports of all classes of merchandise from Italy to Great Britain dropped by some 50% between the second and third quarters of the year, the position may be very accurately visualized.

Owing to the rapidly expanding production in such countries as Italy which some time ago exported 50% or more of their production, the question naturally arises as to where the excess is going. It is now known that Italy is making rapid strides in the export of rayon to India and unless some price arrangement is arrived at between British and American firms and Italy, a serious price-war would appear to be inevitable.

As referred to above the firm of Courtaulds Ltd., in conjunction with the Viscose Co., is making headway in all parts of the world and the recent arrangement entered into with the Glanzstoff Company in Germany, leaves England and United States of America with only one serious competitor namely, Italy. As it is obvious that much money will be required for research into the possibilities of the rayon industry, it would appear desirable that some arrangement should be reached with the large Italian firms before reserves are to be brought into a useless price-war.

Rayon Exports

In the export trade Britain herself continues to make satisfactory progress, a large trade being done with Australia and Canada apart from many foreign countries. In October 1925 the total exports were £494,696 sterling and in November this figure had risen to £522,762 sterling. The increase is not sensational but none the less perfectly steady and apparently well maintained.

New Companies Formed

The year 1925 was remarkable for the number of new companies formed with the object of producing rayon and a list is given in table herewith of all the companies of any importance in the class of potential producers.

In addition to those shown on this list which includes all the companies recently asking for capital or prominent in other ways, there are a number of other developments of importance. In the British section a new plant is to be erected at Kendal close to the borders of Lancashire by a company named *Silvandor Ltd.* The capital is in the neighbohood of £1,000,000 and the estimated output is put at about 40 tons per week. *Raysheen Ltd.*, with a capital of £300,000,

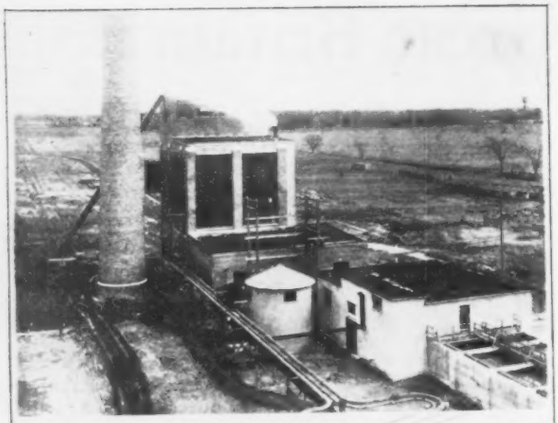
(*Continued on page* 323)

POTENTIAL PRODUCERS OF RAYON IN GREAT BRITAIN

BRITISH Name	Capital in £	Plant location	Process	Estim. Prod. tons per week	Estim. date of full production 1926
British Visada	360,000	Lancashire	Viscose	12	November
Rayon Mfg.	330,000	Surrey			June
Apex	400,000	London	Cellulose-Acetate	10	October
Western Viscose	400,000	Bristol	Viscose	12	November
Neura-Art Silk, Ltd.	420,000	Lancashire	Special (Sindl)	10	December
Kirklees Mfg.Co.	100,000	Lancashire & Gloucester	Viscose	Over 5	Early
Bulmer Rayon	600,000	Suffolk	Viscose & Nitro-Cellulose	30	September
FOREIGN British Enka	750,000	Lancashire			Late 1926 or 1927
British Snia Viscosa	£1000 (Prelim.)	Lancashire	Viscosa & (Slide) or Sniafil		Unknown

Making Du Pont

By Douglas



Power Plant and Plant for Water Filtration at the Du Pont Rayon Co.

One of the Chemical Buildings Where the Viscose Solution Is Made

View of Tanks Where Cellulose Xanthate Is Dissolved to Form Viscose

SOME day—we don't know when—the story of how rayon is made will lose its news interest. Today it is as much a headliner as ever.

The writer judges this by his own personal reactions. He has had the opportunity of visiting a number of different rayon plants—but has not yet reached the point where the romance of these trips fails to thrill him.

He would hesitate a long time before taking his readers through a cotton mill, for example. But rayon is "something else again"—and consequently he is going to start a brief tour of inspection through the plant of the duPont Rayon Company, at Buffalo. Incidentally, this trip is of particular interest because the operations there are based on the spool-spinning method, whereas the last viscose rayon plant described by the writer employed the "cake" or "bucket" method.

Background of Plant

Organized in 1920, as the result of a merging agreement between E. I. duPont de Nemours & Co., and the Comptoir des Soies Artificielles of France, the DuPont Fibersilk Co., later changed to the DuPont Rayon Co., has progressed rapidly to the position of the second largest rayon manufacturer of the United States. With its original plant at Buffalo now being doubled, and with new units at its Old Hickory, Tenn., plant coming rapidly into operation, the company, when present plans are completed, will have an annual output of about 20,000,000 lbs. of rayon.

If the writer could forecast the eventual productive capacity of the DuPont Rayon Company he could predict the broad future of the rayon industry itself—because a visit to Buffalo convinced him that this company, with its extensive chemical, engineering, and statistical research, will always be in a position to get its full share of the growth of synthetic fibres.

Unfortunately, he cannot take his readers through the most interesting and most vital section of the Buffalo plant — the "semi-works." Some years ago, the writer published an account of a trip through the DuPont dye plant at Deepwater, N. J., and laid special stress on the "semi-works" there. Similar emphasis is necessary in this rayon story because this is the department of the plant where the future is being charted.

"Semi-works" means what is says. It is the section where experimental work is conducted on a semi-commercial scale. It is a glorified laboratory —but far more interesting than a laboratory because its operations are sufficiently practical to foreshadow actual results in the manufacturing plant proper.

Some 35 or 40 chemists and technicians are employed to direct the work of this branch. But the sum of these salaries plus the wages of the employes does not indicate more than a part of the total cost of the "semi-works." Cooperating with the research department of the DuPont Engineering Co., this organization keeps itself busy by building and utilizing new equipment, much of which is eventually scrapped; consuming large quantities of raw materials, which find their way into the sewer; and producing lot after lot of rayon which never appears on the market.

This seeming waste—the only "inefficiency" which the writer noticed

Throwing Room Where Rayon Is Twisted

One of the Reeling Rooms Where Rayon Is Put in Skein Form

Rayon at Buffalo

G. Woolf

at Buffalo—is the most vital by-product of the whole plant because it represents the contribution which the DuPonts are making to the sum total of knowledge regarding fundamental cellulose chemistry and its practical mechanical application to synthetic fibre manufacture.

The Chemical Plant

Skipping regretfully over this phase of our story, we come to the start of actual production—the chemical plant, where is produced the viscose solution which is later to be transformed into rayon.

At the start, the writer experienced a shock of surprise at the apparently limited size of this plant, as balanced against the actual production of DuPont rayon. He soon learned, however, that this compact chemical unit operates 24 hours per day, every day in the year, whereas the "textile" unit operates only eight hours per day, five and a half days per week.

Mercerizing

The DuPont organization uses wood pulp exclusively as the raw material for its rayon. It has experimented with cotton linters and has arrived at the conclusion that no improvement in strength or appearance of product results from their use. Furthermore, it has found that, by cultivating definite sources of wood pulp supply and cooperating with them to the full extent, it has been able to receive a constantly improving raw material whose cellulose content and potential viscosity of solution may be depended upon absolutely.

The first operation, that of mercerizing the cellulose of the wood pulp, is conducted on the top floor of the five-story chemical building. The route from this process to the packing of the ultimate rayon is entirely continuous. No "back-tracking" is necessary at any stage. The product, in its successive stages, drops by gravity through chutes from one floor to the next in the chemical building—and when it reaches the "textile" building is routed through the various processes with equal continuity.

The mercerizing is carried on in so-called "steeping presses," in which the sheets of bleached wood pulp are immersed in an 18% solution of caustic soda for approximately one hour. At the end of that time they are pressed to remove excess liquor.

"Crumbing"

The sheets of alkali cellulose are then dropped by gravity to the next floor into the crumbing machines or "Pfleiderers" made by Baker-Perkins Co., Inc., of Saginaw, Mich. The sheets from two "steeping presses" are combined into the charge for one "Pfleiderer." In the latter machine, the alkali cellulose is slowly chewed up by revolving knives and carefully blended. This operation takes approximately three hours.

Ripening

Once again, the product is dropped by gravity to the next floor where it is caught in small trucks and left to "ripen" in an atmosphere, the temperature and humidity of which are carefully maintained. This process is of great importance as upon proper ripening depends largely the viscosity of the resulting solution. A strict schedule of entrance into and departure from this room is maintained—and this represents one of the vital secrets of rayon manufacture.

The ripened alkali cellulose is again dropped by gravity to the "Barrette room," where it passes into so-

(*Continued on page 325*)

Another Reeling Room Where Rayon Is Put in Skein Form

One End of a Dryer Where Skeins of Rayon Are Dried and Conditioned

Inspection Room, One of the Most Important Departments of the Plant

One of the Many Chemical Laboratories

Physical Laboratory for Testing the Product

Something about Nothing *or* Nothing about Something

You Pay Your Money and Take Your Choice

By Jack Card

LIFE is artificial anyway.

They even had to create an artificial name for artificial silk because they didn't like the term "artificial."

And so it goes.

But, seriously speaking, I wonder if my readers—covering, according to audited figures, 90-odd percent of the much discussed textile industry—realize how fortunate they are to be living in a time when artificial things are happening so rapidly and so thrillingly.

I am old enough to remember—and young enough to laugh at—the time when there wasn't much to talk about except the thread-bare subject of supply and demand. As an economic law, that's quite all right; but as a best seller, it just isn't there.

And see what we have with us today!

Look 'Em Over

In the last decade, we have had:

(1) An international mess which made previous wars look like a minor row in a prehistoric saloon;

(2) A revolution in the dye industry with the result that German chemists sneak into this country to find out how dyes are made anyway;

(3) A period when you could sell anything you had in stock, no matter how rotten it was; followed by a period when you couldn't sell anything, no matter how good it was—and irrespective of your kind offer to give it away and pay cartage to boot;

(4) A second edition of the Civil War—fought with words—during which the South claimed the North didn't know how to make goods, and the North was sure the South didn't know how to sell them—and neither side made any money, so there was no hard feeling;

(5) Wholesale resignation of textile manufacturers from the job of producing fabrics—and their entrance, to soft music, into the business of organizing sewing circles, mill bands, Senates and Houses of Representatives, literary clubs, domestic science classes—and other non-profit making institutions;

(6) The rise of a new star called Rayon which has upset the theory of the nebular hypothesis and other cosmic formulae.

But, what's the use? We could name a lot more, if we could remember them. But that's enough to show that things ain't what they was in the good old days.

All of which leads up to the pungent and odoriferous question: Where are we going—and how—and why?

Operating, as I do, under the guise of a nom de plume, I can say what I want—and let the editor take the blame.

Be that as it may, here's my prediction for the future:

(1) A steadily advancing scale of textile wages;

(2) A coincidental increase and stabilization in profits of textile mills;

(3) A cooperative spirit between management and personnel such as has never been dreamed of;

(4) An industry-wide statistical survey which will enable a manufacturer to know at any given time how much of a certain fabric is being made, how much is in stock and where, and how much is being sold;

(5) Increasing growth of synthetic fibres to a point where they will be serious competitors, and possibly replacers of Nature's products.

(6) Development of a National Textile Research Institute which may—or may not—overturn most of our fundamental ideas on textile manufacturing technique but which, at any rate, will let us know what's what.

(7) A system of industrial education which will let the youth of the nation know that a $20 a week job in a mahogany-equipped office is not the goal of all mankind.

Graphic illustration of any and all parts of this absorbingly interesting article

Back to the Vernacular

That's a long time for me to be serious about anything. So now I'll laugh with my readers, at the absurdity of these ideas—reserving, however, the right to "laugh last" when these ideas are translated into actualities. Because they will be—seriously, or not, as you choose.

All of which leads up to a question about which my wife and I have had many a pleasant—as family quarrels go—discussion.

The question is, to repeat in part, whither is industrialism leading us? And, once more, how and why?

There's a cross-word puzzle for you.

You see, my wife read in one of these infernal newspapers something about a man named Gandhi, who doesn't take kindly to this idea of mechanical development and who wants to preserve India as an arts-and-crafts country—a nation where people work with their hands and beam on their handiwork and call it good. And get considerable personal satisfaction by so doing.

"Down with the automatic spinning frame and high-speed loom; up with the spinning wheel and hand loom," says Gandhi.

"Aha," says my wife, casting an inscrutable glance in my direction. *There's* a real man. *He* isn't fooled by the fact that an American worker gets $30, say, a week, and an Oriental 30c. *He* knows that the Oriental's purchases with his income make the Occidental's look like the 30c. *He* is aware that it isn't what money you get—but what you get for your money—that counts. *He* realizes that, to boot, a craftsman gets the joy of working, the thrill of accomplishment, the satisfaction of a job well done"—*and* so forth, *and* so forth, ad infinitum.

Man, the Master

Of course that was my cue. Don't I work for a reputable journal which is supported by manufacturers who call a spade a spade, or an automatic loom an automatic loom? Of course I do—and get a lot of fun out of it at that.

"My dear," says I, clearing my throat in due form, "that's an illustration of the danger of half-knowledge. Nurtured, as you were, in the bosom of a silk-stocking family and protected against the encroaching evils of information about a sordid world, you, still the debutante, know nothing about life and its problems and its complexities." (All of which, of course, is bunk because my wife has a better business head than I have—and knows it. But this is an aside.)

"Furthermore," I went on, still preserving my feudal dignity as lord of the manor, "where would you and I and our children be if it were not for the march of civilization? Compare the lot of the Oriental—illiterate, undernourished, dirty, ignorant—with that of the New Yorker—well-dressed, prosperous, intelligent, healthy. We have to pay some price for this transition—and certainly the relinquishing of a little of the joy of work well done is not too steep an admission fee!"

And then my voice sort of trailed in the distance.

I remembered that a journalist, with the opportunity for a new experience and a new contact every day—and almost every hour of every day—was attempting to speak for the loom tender in Lawrence, the bolt-maker in Detroit, the iron-monger in Pittsburgh.

Untangling This Mess

Let's get this straight.

I'm not a long-haired radical. From where I sit penning these lines, I can see a man who thinks I'm the most benighted damnfool conservative who ever drew breath.

But I'm radical enough to realize that intensified industrialism isn't quite the perfumed beneficence that it's cracked up to be. Call this a thought-in-law, if you like. Mrs. Card doesn't read TEXTILE WORLD so there will be no hard feelings.

Seriously enough, though, is it necessarily axiomatic that an evening at the movies, or in front of the radio knobs, or in flirtation with some highly-recommended, but nevertheless doubted, gin can compensate for eight hours of unbroken and unthoughtful operation of a machine, whence one bolt follows another, or one piece of goods trails its predecessor—in seemingly endless and unidentified succession?

Don't you think that you, as a manufacturer, and I, as a cowardly journalist hiding behind a nom de plume and enjoying free lunches at Metropolitan clubs, owe a little thought to this problem?

Don't you believe that our big job in the next 25, 50 or 100 years is to put our industry on a basis where every individual connected with it has an outside chance for some of the happiness you and I get out of our work?

And don't you think that the realization of some of the predictions I hazarded earlier in this article—particularly the last one—may contribute something to this program?

Curtain Speech

If you're mad, I'm sorry. If you're with me, I'm glad. If you haven't read this far, I'm not surprised.

My salary goes along just the same whether I write this or not—and whether you read it or not.

And so, a happy New Year to you—one month late.

An Analysis of 1925 U. S. A. Cotton Reports

Their Value in Quickly Reporting Important Changes in Crop Outlook Confirmed—Chronic Inaccuracy of Acreage Planted Reports Pointed Out and Improved Method Suggested—Should Confine Early Reports to Condition, Par Values and Indicated Yield Per Acre

By John A. Todd
Author of "The World's Cotton Crops"

Mr. Todd, who is author of The World's Cotton Crops and an eminent cotton statistician of Liverpool, England, and who has been a frequent contributor to Textile World, sees much to commend in the government cotton reports of this season and much to criticise in a constructive manner.

Mr. Todd's suggestions for the improvement of the reports are, in part, as follows: (1) That only conditions, par values and indicated yields per acre be published during early months; (2) that by October 18 a revised estimate of acreage planted and acreage abandoned be published thus making possible a more accurate preliminary estimate of acreage harvested; (3) final figures of acreage planted and harvested for the preceding season should be published in March instead of June.

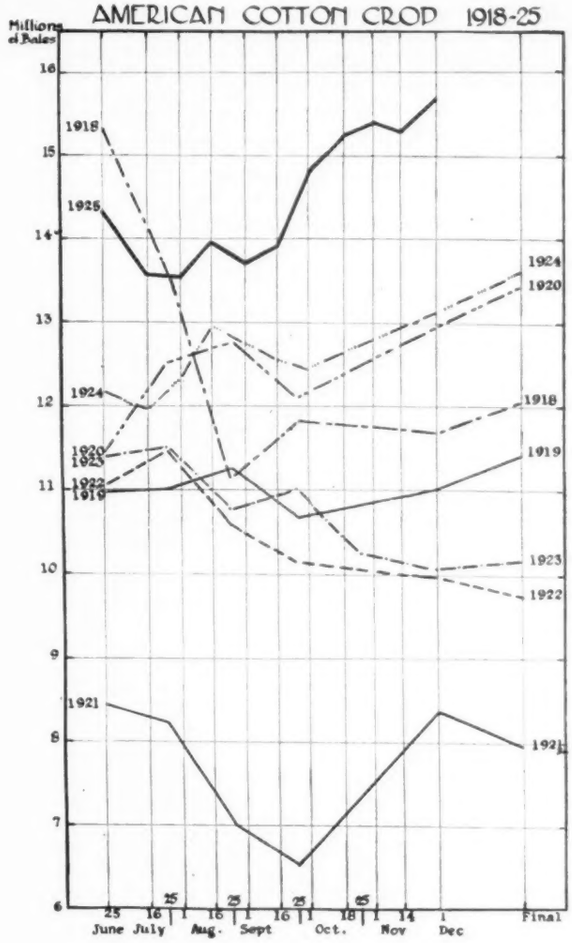
THE 1924 criticism of the fortnightly cotton reports of the U. S. Department of Agriculture has been quite equalled if not even excelled by the bitterness of the complaints levelled at the system during the current season: and again the writer is inclined to think that much of that criticism has been unjustified and certainly misdirected. Last year the complaint was all of the excessive frequency of the reports. This year it has been more of their inaccuracy, or rather of the fact that the crop "forecasts" changed so materially from one report to another.

In order to estimate the force of these criticisms it is necessary to have the facts before us and the accompanying table gives the history of the two seasons under the new system, with the six previous seasons for comparison. These figures can be made to speak for themselves much more effectively in graphic form, and this is done in the diagram of the crop forecasts and estimates throughout the season. The comparison is carried back to 1918, because during the first part of the season that was the only year comparable with 1925. At an early stage, however, 1925 established a definite similarity with 1924, and this became very marked during August.

Last Two Seasons Compared

The mid-August report showed a good recovery due to fine weather during the summer, but again like last year, this gave place in the latter part of August to the apparent certainty of severe damage by drouth and on September 1 the crop forecast was reduced to 13,740,000 bales.

Once more, however, as in 1924, the drouth broke in September, but too late, as was generally believed, to do much good. This, however, proved to be a mistake, and the Department deserves the thanks of the trade for being the first to realize this, with the result that from mid September onwards their forecasts went up by leaps and bounds to the utter astonishment of the trade. It took a long time to convince them that the Bureau was right, but gradually the enormous weight of the ginnings made conviction inevitable. Then once more the whole appearance of things was changed. The rains lasted too long and the crop prospects began to deteriorate. The Bureau were hard to convince and went on raising their forecasts until in that of November 14th they were compelled by a succession of three bad ginning returns to reduce their forecast; but no sooner had they done so than a marked improvement in the weather again brought the ginning figures up to record totals, and the Bureau's estimate of the crop on December 1st was raised once more to 15,603,000 bales. Another fortnight of very heavy ginnings after that date would probably have justified a still greater figure, and the market took this as proof that the final outturn of the crop would be not less than 16 million bales. Whether that will be justified or not remains to be seen; but much will depend on the January 16th ginning figures which should be available before this appears in print. If that figure is less than 15,350,000 bales the prospect of the Bureau's estimate being substantially increased will not be so rosy.



Value of Certain Reports

In view of this history what is to be the verdict on the Bureau reports

John A. Todd

for the season? The writer is inclined to think that from one point of view they have never been more valuable. They have very quickly noted and reported a succession of remarkable changes in the crop outlook, and that is exactly what they are for. Most of the criticism levelled at the Department has been that the Bureau for a time grossly under-estimated the crop, but the only possible reply to that criticism is to keep on reiterating that the Bureau's crop figures published prior to December 1st are not estimates of the final outturn of the crop, but merely indications of how the crop is getting on *at the time*. The writer has repeatedly pointed out this persistent misunderstanding on the part of the trade, and this season's experience have driven him to the conclusion that as it seems impossible to make the trade realize the difference between the crop "forecasts" and the *estimates*, it would be better to drop the former altogether and confine the early bureau reports to the condition figure and the indicated yield per acre. This would serve the real purpose of the bureau reports, which is to show the cotton world how the crop is getting on from time to time throughout the season. For many years the cotton world had nothing to go on throughout the

growing season but the condition figures, and they had learned to understand these figures and to make intelligent comparisons. The idea of the Department in publishing the par values and calculating the indicated yield per acre by applying the condition figure to these basic figures was good; but the conversion of this yield per acre into a definite total crop figure has unfortunately misled the public, and it would be better to drop the latter altogether.

Inaccuracy of Acreage Reports

The answer will probably be made to this criticism that everybody in the trade would immediately make the calculation for themselves by applying the indicated yield per acre to the estimated acreage planted; but this only leads to what is to the writer's mind the real criticism of the Bureau's reports. The fundamental defect of the whole system is the chronic inaccuracy of the acreage reports. The facts on this point are very striking. The Government publishes throughout the season no less than five different reports on the area. The first is an estimate of acreage "planted and in cultivation as at June 25" which is published with the second Bureau report on July 2. Since 1921 this estimate has been revised in December and again in the following year when the final figure is published on June 2 with the first bureau report as at May 25. The first estimate of acreage harvested is not published till December and this also is revised in June of the following year.

The Peculiar Acreage Estimates

Table II. gives the history of these various estimates since 1908 and the main point is that the revision of the acreage planted has throughout the whole of that period of 18 years been upwards and substantial in *every year except one*, 1922. The result is that all the bureau's reports throughout the season are founded on an acreage figure which in practically every case turns out to have been under-estimated.

This year the question has been made even more important by a slight change in the Government's practice with regard to the reports. From October 1, they did not publish the usual condition figure and par values and gave merely an indicated crop figure and an indicated yield per acre. From October 18 the yield per acre was calculated on the acreage *harvested* instead of the acreage *planted* as formerly, and at the same time they published a definite estimate of acreage abandoned (4.8%) but applied this to the original acreage planted, the result being in effect a preliminary estimate of acreage harvested. But when the December 1 report came out the original estimate of acreage planted was raised by nearly 2 million acres, and as the percentage of abandonment was practically unchanged (4.6%) the result was that the preliminary estimate of acreage harvested had also to be raised nearly 2 million acres.

HISTORY OF THE AMERICAN CROP—1918–1925

	1918–19	1919–20	1920–21	1921–22	1922–23	1923–24	1924–25		1925–26
Condition, %									
May 25	82.3	75.6	62.4	66.0	69.6	71.0	25/5	65.6	76.6
June 25	85.8	70.0	70.7	69.2	71.2	69.9	25/6	71.2	75.9
							16/7	68.5	70.4
July 25	73.6	67.1	74.1	64.7	70.8	67.2	1/8	67.4	65.6
							16/8	64.9	62.0
August 25	55.7	61.4	67.5	49.3	57.0	54.1	1/9	59.3	56.2
							16/9	55.4	53.8
September 25	54.4	54.4	59.1	42.2	50.0	49.5	1/10	53.5	.....
							18/10	54.7	.....
October 25	.....	51.1	60.3	43.2	52.6	47.8	1/11	55.9	.....
Yield per acre (lbs.)									
June 25	200.0	156.4	155.9	152.2	151.9	142.6	25/6	143.8	147.7
							16/7	141.3	140.0
July 25	177.3	156.8	170.4	148.0	157.2	143.9	1/8	146.5	139.8
							16/8	153.5	144.1
August 25	145.2	159.8	174.0	127.0	145.2	134.8	1/9	151.5	141.5
							16/9	149.2	143.5
September 25	154.1	158.0	163.2	118.0	139.2	137.7	1/10	148.0	152.0
							On acreage harvested		159.7
							18/10	150.1	164.7
October 25	.....	.....	.....	.....	.....	128.1	1/11	151.6	166.4
							14/11	153.7	165.5
December	155.9	158.2	170.8	127.0	141.6	128.8	1/12	156.8	162.3
Final	159.6	161.5	178.4	124.5	141.5	130.6	Final	157.4	.....
Indicated crops (000 bales of 500 lbs. gross)									
June 25	15,327	10,986	11,450	8,433	11,065	11,412	25/6	12,144	14,339
							16/7	11,934	13,588
July 25	13,619	11,016	12,519	8,203	11,449	11,516	1/8	12,351	13,566
							16/8	12,956	13,990
August 25	11,137	11,230	12,783	7,037	10,575	10,788	1/9	12,787	13,740
							16/9	12,596	13,931
September 25	11,818	10,696	12,123	6,537	10,135	11,015	1/10	12,499	14,759
							18/10	12,675	15,226
October 25	.....	.....	.....	.....	.....	10,248	1/11	12,816	15,386
							14/11	12,992	15,298
December	11,700	11,030	12,987	8,340	9,964	10,081	1/12	13,153	15,603
Final	12,041	11,421	13,440	7,954	9,762	10,140	Final	13,628	.....
Ginnings (000 running bales)									
							1/8	22	159
							16/8	136	578
September 1	1,308	143	352	486	806	1,143	1/9	947	1,887
							16/9	2,666	4,283
September 25	3,771	1,835	2,250	2,920	3,866	3,232	.....	.....	.....
							1/10	4,528	7,128
October 18	6,811	4,929	5,755	5,497	6,978	6,409	18/10	7,616	9,522
November 1	7,777	6,305	7,509	6,646	8,139	7,556	1/11	9,716	11,209
November 14	8,706	7,604	8,915	7,274	8,870	8,369	14/11	11,162	12,264
December 1	9,571	8,844	10,141	7,640	9,320	9,243	1/12	12,238	13,873
December 13	10,081	9,397	10,876	7,791	9,489	9,549	13/12	12,792	14,826
January 16	11,049	10,307	12,015	7,912	9,648	9,944	16/1	13,307	.....
Final	11,906	11,326	13,271	7,978	9,729	10,171	Final	13,639	.....

What makes the matter still more confusing from a statistical point of view is that these revisions of the acreage estimates are not made directly on fresh information as to the acreage, but are calculated backwards from the crop estimates later in the season, and this produces a very peculiar state of affairs. During the first part of the season the pivot of the whole calculation is the indicated yield per acre obtained from the condition figure and par value, and this is applied to the estimated acreage planted, giving the indicated crop. But during the latter half of the season when it becomes possible to estimate the crop directly on the basis of the ginning figures, the whole system is reversed. The indicated yield remains more or less the same and the revised acreage is calculated backwards from the crop.

Should Await Revised Acreage

The point of all this rather elaborate discussion of the system is that the reports throughout the growing season are based on an acreage estimate which is always subject to substantial revision; why then should the Bureau make official use of that acreage figure at all? If the Bureau merely published the condition figure and the indicated yield per acre, private estimators would no doubt apply that to the acreage figure, but they would do so at their own risk and their crop forecasts would not have the same weight with the market as those of the Government. Let the Government postpone their first forecast until such a point in the autumn as will enable them to revise the acreage planted, and so avoid the confusion in all the figures due to the change over from acreage planted to acreage harvested. This would in effect mean that the Government would issue no crop forecast at all till probably October, but that after all would only be reverting to the former practice in which no estimate was issued till December.

A Modified System Suggested

To sum up, the writer's feeling as to the best course for the Government to follow in future is tentatively as follows: (1) During the early months of the season the Bureau should publish only the condition figure, par values and indicated yield per acre. The publication of the par values in advance has been very useful and should be continued if possible. (2) At the earliest possible date, say October 18, they should publish a revised estimate of acreage planted, with an estimate of abandonment and consequently a preliminary estimate of acreage harvested. It would then be possible to form some opinion as to the ultimate outturn of the crop, though keeping in view the very serious effects which the vicissitudes of the weather even in the last three months of the year may have on the final yield. (3) A further point should also be considered, namely the desirability of publishing the final figures of acreage planted and harvested in March instead of on June 2. The latter date is too late to be of any use to the trade which has been devoting its energies to guessing the increased acreage from about April onwards, but as the invariable custom is to estimate the new acreage as a percentage increase, the value of the result is greatly minimized by the possibility of the Government adding another million acres to the last year's figure of acreage planted, or possibly, as in 1921, 1922 and 1923, knocking half a million off the December figure.

If these modifications could be adopted the writer believes that the new system would become increasingly valuable every year as further experience accumulates and as the trade comes to understand the system more fully.

AMERICAN COTTON CROP—ACREAGE PLANTED AND HARVESTED AND ABANDONMENT

Crop	Planted				Harvested			Abandonment	
	1st	2d	Final	(3) on (1) + or —	1st	Final	(5) on (4) + or —	(5) on (3)	Per cent on (3)
	(1)	(2)	(3)		(4)	(5)			
1908	32,081	.....	33,370	+1,289	.....	32,444	.....	926	2.8
1909	31,918	.....	32,292	+ 374	.....	32,044	.....	248	0.8
1910	33,196	.....	33,418	+ 222	.....	32,403	.....	1,015	3.0
1911	35,004	.....	36,681	+1,677	.....	36,045	.....	636	1.7
1912	34,097	.....	34,766	+ 669	.....	34,283	.....	483	1.4
1913	35,622	.....	37,458	+1,836	.....	37,089	.....	369	1.0
1914	36,960	.....	37,406	+ 446	.....	36,832	.....	574	1.5
1915	31,535	.....	32,107	+ 572	.....	31,412	.....	695	2.2
1916	35,994	.....	36,052	+ 58	35,239	34,985	— 254	1,067	3.0
1917	34,600	.....	34,925	+ 325	33,634	33,841	+ 207	1,084	3.1
1918	37,073	.....	37,207	+ 134	35,890	36,008	+ 118	1,199	3.2
1919	33,960	.....	35,133	+1,173	33,344	33,566	+ 222	1,567	4.5
1920	35,504	.....	37,043	+1,539	36,383	35,878	— 505	1,165	3.1
1921	26,519	32,332	31,678	+5,159	31,427	30,509	— 918	1,169	3.7
1922	34,852	34,485	34,016	— 836	33,742	33,036	— 706	980	2.9
1923	38,287	39,224	38,701	+ 414	37,420	37,123	— 297	1,578	4.1
1924	40,403	41,490	42,641	+2,238	40,115	41,360	+1,245	1,281	3.0
1925	46,448	48,160	.....	+1,712	44,231	(18 Oct.)	+1,714	2,217	4.8
					45,945	(1 Dec.)		2,215	4.6

Tendencies in Textile Merchandising

Excessive Productive Capacity of Cotton, Wool and Knitting Industries the Basic Cause of Hand-to-Mouth Buying and the Need of Merchandising That Will Stimulate Consumption—Notable Progress Being Made Toward More Stable Condition

Introduction by Charles H. Clark

THE generally unsatisfactory character of business in textiles, other than silk and artificial silk, since the deflation of the business boom of 1919-20 has been variously ascribed to hand-to-mouth buying, styles restricting demand for women's wear to a minimum, diversion of buying power to such luxuries as automobiles, radios, talking machines and pianos, to excessive imports, to high priced raw materials, to underconsumption or to a productive capacity in excess of a restricted demand.

Need for Sales Stimulation

Recognizing this unsatisfactory character of business, and without much theorizing as to causes and tendencies, textile merchants and manufacturers have been giving greater attention than ever before to stimulation of sales by the introduction of new lines of goods and by new and improved merchandizing methods, at the same time striving to reduce production costs by more efficient methods. As a rule only moderate success has resulted from these efforts, and now that raw cotton and wool prices appear to have become stabilized upon a lower level than has been enjoyed for several years, the trade is commencing to doubt whether there will be a greater permanency to adverse styles for women's wear, to the silk and rayon craze, to the orgy of luxury buying, to overproduction or underconsumption and to hand-to-mouth buying.

"Hope springs eternal in the human breast," particularly in the business breast, and it is fortunate that this is so, for, as Dr. Samuel Johnson says: "When there is no hope, there can be no endeavor." There is something more than a suspicion, however, that many manufacturers and merchants have been indulging in too much hoping and too little endeavor. There has been too much laissez faire, too much waiting for old conditions to return, too little acceptance of and adjustment to fundamental causes and changed conditions, and too much emphasis upon the conditions themselves and upon other factors restricting trade that are of a temporary character.

Any attempt to locate basic causes of present conditions cannot fail to disclose a striking similarity between those suffered by domestic and foreign manufacturers of cotton and wool textiles; it must also disclose similar conditions in other industries, particularly as to overproduction or underconsumption and hand-to-mouth buying; it will also demonstrate that other industries which have been most successful in overcoming sales resistance have attained that objective by forced selling and the introduction, in some instances, of merchandising methods of a decidedly questionable character. It will show that recent and present unsatisfactory conditions in the cotton and wool branches of the textile industry, and particularly in the former, had their birth in the unbalancing of demand and supply during the World War, a condition that was accentuated by the speculative orgy of 1919-20, was further accentuated during the succeeding years by wide fluctuations of raw material prices and by adverse styles, and that hand-to-mouth buying and its attendant difficulties for manufacturers, wholesalers and cutters was a result and not a cause of the industry's basic difficulties; furthermore, that hand-to-mouth buying and the sale of textiles at less than a fair price or reasonable profit will commence to disappear as soon as a normal balance between available production and demand is attained on certain lines, and must be eliminated at such time as normal demand balances or exceeds available production.

The Man of the Hour

In the meantime it is inevitable that steadily increasing study and attention must be given to improvement of merchandising. The man who can develop and sell a new line, or create broadened outlets for old lines is the man of the hour. The meeting of the demand to be thus created will require much plant revamping and re-equipping, and the increasing of efficiency of machinery and labor in existing mills. Few revolutionary changes or tendencies have been developed thus far, but the opportunities for improving and expanding textile distribution are great, and the possible developments of the next quarter century offer a subject for interesting speculation.

The oldest textile manufacturers and merchants now living cannot recall the time when there was not complaint every few years of over-expansion of the industry's productive capacity, and of changes in styles and character of demand that tended to restrict and unbalance mill production, but these veterans will probably agree that at no time has the unsettling influence of such factors been more acutely felt, and the efforts to provide remedial measures been more general and persistent than since the business slump of 1920.

If the development of the industry were traced from the advent of the factory system it would be found that the most radical changes in processes, in improved equipment and in fabric styles exerted only a temporary unbalancing and depressive influence. This was true certainly up to the opening of the present century, and in a general way until the World War. Even the depressive effects of the most adverse tariffs of the 19th century were never permanently serious.

Style Changes are Rapid

Failure of adverse circumstances to exert a more serious and permanent effect upon the industry during the 19th century was due principally to the fact that its expansion was almost always a step or two behind increase in population and demand. Radical style changes, too, produced less serious reactions upon markets and mills because they were much slower in changing than in these days of universal style publicity, rapid transportation and mobility of buyers and consumers.

Compare the slow change from hoop-skirt days to the relatively sudden evolution of the short and tight-fitting costumes now worn by women; remember that this change took place when the productive capacity of the industry was unbalanced by World War demands and the excesses of 1919-20, and it is not difficult to understand why the effect was so unsettling. Something like this occurred when the muslin and knit underwear formerly worn by women was displaced by silk or eliminated entirely within a period of about two years, whereas it took more than twenty years to kill the hoop skirt and its accompanying voluminous outer and under garments. Men react to style changes more slowly than do women, but the latest switch from worsteds to carded woolens was accomplished in record-breaking time as compared with any previous similar style change.

It may be well at this point to recall that merchants controlled textile manufacturing in this and foreign countries when it was a household industry, and for many years after it became established upon a factory system largely through their efforts. The gradual segregation and specialization of textile manufacturing and merchandising, which was completed in this country during the Civil War and the panic of 1873, was due more to the financing and credit facilities afforded by commission merchants than to their ability in creating markets and products, and was due more in the case of manufacturers to increasing pressure upon the mills for production than to their lack of fabric creative or merchandising ability. Since then, however, it is no reflection upon textile executives, and particularly cotton mill executives, to state that as a result of disuse their merchandising ability has become dormant and their dependence upon commission merchants and brokers greater than ever before in the history of the industry. During all this time the lack of merchandising knowledge and contact has caused mill executives little concern because, excepting for brief periods, demand has been equal to or in excess of supply.

About 25 years ago, largely as a result of the low Wilson-Gorman tariff, production of domestic woolens and worsteds became in excess of the supply, and mill executives in this branch of the industry were forced to aid in the merchandising of their products, and subsequent over-expansion of the industry stimulated this movement with the result that a major proportion of wool manufactures is now sold direct. Overexpansion of the knit goods industry was responsible for a similar change in selling methods, and was aided by the fact that most knitted products leave the mill in finished form for consumption. There has been a parallel evolution in merchandising methods in the silk industry, but until after the World War and the slump in business that followed the boom of 1919-20 the cotton industry felt only temporary need of greater merchandising ability in its mill executives and even now there is no well-defined trend toward direct selling.

Unbalanced Status Chronic

While in the light of experiences of recent years it is now realized that the productive capacity of the cotton, wool and knit goods industries was in excess of normal demand prior to the World War, it was the abnormal character of Government demand during the last two years of the World War, and the abnormal volume of demand from consumers during the boom period of 1919-20 that rendered chronic the unbalancing of production to demand in these industries. Briefly stated, this unbalancing was largely due to the throwing of all available machinery upon war goods and the installation of additional machinery to take care of regular trade; during the boom of 1919-20 there was further expansion of machine equipment, and since then, because of this fundamental cause, and various contributing causes, demand has not caught up with machine capacity.

Because overproduction or underconsumption is more chronic in the cotton goods than in the other industries affected, it is possible that these causes and effects may be made to stand out in bolder relief if they are considered solely in relation to the cotton industry. It requires no extended analysis of production data to demonstrate that productive capacity of the cotton industry has increased more rapidly during the last 25 years than population. In 1899 there was a production of 4,523,395,616 square yards for 75,994,575 people, or 59.52

square yards per capita. In 1923 production was 8,264,219,579 square yards for a population of approximately 110,000,000, or 75.13 square yards per capita. The percentage increase in production was 82.7%, in population 7.474% and in square yards per capita 26.35%. While these census figures of production for 1923 prove conclusively that the industry's machine capacity is in excess of normal consumption, it must be explained that it was not until early 1925 that these figures became available and that no prior census figures reflected any such staggering increase in production. Production for 1921 was 6,703,835,943 square yards and in 1919 was 6,317,397,984 square yards; had census figures been available for the last six months of 1919 and the first six months of 1920 it is probable that they would have exceeded 1923 production, but owing to the arbitrary periodicity of census reports we are without this information.

Index of Cotton Spinning

It is true that there is another source of information regarding the comparative productive capacity of the industry that might have been utilized to check increases or decreases, but it has remained practically dormant and cannot be considered an accurate check at its best. It is to be found in the monthly report of the Census Bureau on activity in the cotton spinning industry, and the figures in question are those for active spindle hours and averages per spindle in place by states. Unfortunately these figures are available only since September, 1921. They report spindles as active if they are operated at any time during the month, and do not take cognizance of short time and over-time operation; furthermore, they do not take account of the fact that a very large percentage of so-called "spindles in place" are permanently inactive, the number being possibly as great as 5,000,000 spindles. Nevertheless, when total active monthly spindle hours jump suddenly from an average of not over 8,000,000,000 to over 9,500,000,000, as was the case in March, 1923, it might have been expected to raise doubts among merchants and manufacturers as to the ability of consumers to absorb so large an increase in production.

The majority of those who follow these monthly activity reports at all are accustomed to place chief reliance upon the percentage of active spindles to spindles in place. The increase of spindles in place since 1919 to the present total of a little under 39,000,000 has been less than 4,000,000 and is relatively unimportant; on the other hand, there has been an actual decrease in active cotton spindles during the same period, the average decrease being about 2,000,000. This is the basis of our estimate that there are not far from 5,000,000 cotton spindles in this country permanently inactive.

It seems incomprehensible at first sight that there could have been such an increase in active spindle hours since 1921 when there has been an actual decrease in active spindles, but the riddle is solved when we remember that the normal operating hours of something more than 50% of southern spindleage is a night-and-day schedule. For instance, in March, 1923, when total active spindle hours for the country exceeded 9,500,000,000, mills in the cotton growing States showed 5,117,000,000 active spindle hours, while New England mills had a total of only 3,037,000,000, yet New England mills in that year had 18,053,716 spindles reported active and the South 16,310,360 spindles active. The disparity between operating hours North and South is further emphasized by census figures for last November, when mills in both sections were operating sub-normally, at which time mills in the cotton States averaged 11.26 hours per working day per spindle in place, whereas New England mills averaged only 5.87 hours per day per spindle in place. Figured on the basis of active spindles the disparity is almost as great.

Remembering that the trend of the industry has been southward for many years, that much northern machinery has been transferred bodily to the South and more has been rendered idle by southern competition, we see, further, that the potential productive capacity of spindles and looms operated in the South averages at least 50% to 75% greater than that of those in the North, provided operating efficiency is approximately equal, which is the case. The cotton industry, therefore, is not suffering so much from excess capacity in spindles and looms as it is from overtime operation of its equipment. It is medium and coarse count staple goods that are chiefly affected, these being the principal production of southern mills, but it must be remembered that a large amount of northern machinery whose market has been displaced by southern competition is constantly seeking outlets for its goods at cost, and this in turn tends to hold down prices of southern products of similar character.

Statistics That are Needed

It must be apparent to anyone who has made a close study of this situation that the present excessive capacity and unbalanced condition of the industry could have been avoided if there had been available to manufacturers and merchants accurate statistics of production and consumption by different important classes of products. Probably the temporary unbalancing of equipment and production due to wartime demands and to the boom of 1919-20 could not have been avoided, but if there had been available to the industry statistics showing exactly where production was being dangerously duplicated and competition was becoming excessive it would not have been possible for the industry to have drifted into its present unbalanced position.

In view of the very marked increase in normal and potential productive capacity of the southern branch of the industry within the last 10 years it is encouraging to know that on most lines of coarse count goods, the production of which is largely in the South, demand and supply are today more evenly balanced and prices better stabilized than on most medium count gray and colored goods upon which competition between northern and southern mills remains keenest. Unfortunately there is no certainty of permanence in the improved status of coarse goods, for it is well understood that it is largely due to enforced curtailment of southern production by last summer's drouth and power shortage. It emphasizes the possibilities and need of some effective control of production that has such a wide range between that of a normal day run and a maximum night and day schedule. Merchandising that can keep markets stabilized with such a variable production and without exact production and consumption statistics must be marvelous in its wisdom and efficiency.

Narrow Influence of Style

These coarse count products dominated by southern mills include many running into large annual yardage that are the development of the last 25 years, tire cords and fabric, and coating cloths for artificial leather being examples. These and most of the other coarse cloths, together with household cottons, such as towels, sheetings and blankets, are not used for wearing apparel and are not affected by style or fashion. If we include in this list all other staple cotton goods, whether or not used for wearing apparel, that are unresponsive to style we find that it covers nearly two-thirds of total annual production in square yards or pounds; the figure based upon 1921 production is 64%. The 36% of production whose character and demand are directly under the influence of fashion is that in which northern mills domiuate the market. It is this comparatively limited part of the industry that has felt the restrictive effect of silk competition and of a decree of fashion that has made muslin underwear taboo for women and has reduced length and fullness of dresses to a minimum.

It is this part of the market that has suffered severely from record-breaking imports of English fabrics as the result of an inadequately protective tariff. It has also suffered as seriously from hand-to-mouth buying as has the coarse goods end. And medium count style goods of the gingham order have been affected by all of these factors, and also by excess productive capacity due to southern expansion. In view of these facts it is not surprising that manufacturers of style goods should be showing keener interest in merchandising of their product than ever before, or that they should be devoting keener attention to designing, to improving quality of product and reducing costs.

Harder hit by far than any other class of textile manufacturers have been the old New England Mills which for 50 to 75 years had dominated the market on medium and coarse count

"Sell the goods and I will get the mills!" That double-barelled statement of a mill executive to his selling agent conveys a fairly accurate picture of conditions in the cotton and wool industry.

Until the slump of 1920, mills were built without much thought about finding a market for the product. Now merchandising is the first consideration, and the textile Burbank who can make two orders grow where only one grew before can fix his own salary.

Demand and supply are not balanced, yet the trade is so busy with efforts to sell more goods, and thus restore a normal and profitable balance, that it has no time to attempt an analysis of basic and contributory causes of the present unsatisfactory business situation and a study of methods for their elimination, their prevention or the signaling of signs of their recurrence.

This and the indication of the trend of textile merchandising are the purposes of this series of articles. If they do not disclose changes in merchandising of a revolutionary character it is because they do not exist, or because the trade is keeping them "up its sleeve."

They do, however, disclose the significant fact that mill executives, selling agents and middlemen are discovering an interdependence in their functions that is encouraging co-operative sales effort that must prove of mutual advantage.

Incidentally the articles prove that it is excessive spindle hours and loom hours from which the cotton industry is suffering and not merely too many spindles and looms. In other words, if all of the spindles and looms were located in Massachusetts, or operated under the legal restrictions of that State, production would be insufficient to fill normal demand.

Styles will change eventually and absorb more textiles; abuse of installment buying and of hand-to-mouth buying will effect a partial cure of these maladies, but overproduction and underconsumption will continue permanently or intermittently just as long as the trade lacks approximate statistics of production and sales of its most important lines.

staples. Attempts to give these mills a new lease of life varies from moving south wholly or in part to re-equipping for the production and merchandising of finer counts or specialties. The successful reorganization of these mills that have the necessary financial resources depends almost wholly upon the development of goods for which there is a market and upon their efficient marketing. It is the exact antithesis of the policy preserved in the good old days when demand exceeded production and when mills were built first and markets located later. There is no lack of mills and machinery today such as they are. The slogan of the successful manufacturer is—sell the goods and I will get the Mills!

Style and Buying Policies Change

The only certainty regarding style is that it will change. When luster effects and silks have been the vogue several seasons it is reasonably certain that fashion will demand something different. When women's dresses have reached the extreme of shortness and scantiness the next style change must be to something longer and fuller. When hand-to-mouth buying begins to restrict retail turnover, and supply is less than demand, a change in buying policy will begin, and anticipatory buying will be further encouraged if raw material and fabric prices are as low and stable as at present.

The Line of Least Resistance

Just as long, however, as productive capacity of some parts of the industry exceeds demand, and just as long as the price and style outlook are uncertain, just so long will hand-to-mouth buying be encouraged. Hand-to-mouth buying must force eventually hand-to-mouth production unless the manufacturer is able to pass along to the consumer the cost of financing and risk involved in stocking up in anticipation of a demand that may not absorb the goods produced. Just as long as there is cause for or existence of buyer-resistance the merchandising function must be the chief concern of the manufacturer, and of the selling agent, converter, cutter and jobber. Being a problem common to all it is logical that initial efforts toward its solution should be through co-operative effort of existing merchandising agencies. That is the line of least resistance and that is the chief line of present effort. Certain converters and jobbers are alive to the fact that failure to capitalize this golden opportunity will be fatal, and they are showing a willingness to share the burdens that hand-to-mouth buying or retail buyer-resistance have been imposing upon manufacturers. This co-operative movement, combined with national and trade publicity and various selling aids, constitute the present main trend of merchandising effort.

Assuming the continuance of buyer resistance, and failing substantial aid from distributors in overcoming it, the future trend of merchandising must be of a stop-gap nature, involving the elimination of inefficient distribution. The textile industry already has several notable examples of this character: of jobbers, cutters and retailers who have assumed control of production for part of their needs, and of manufacturers who have assumed control of distribution to retailers or to consumers. This may be eventually "the way out," but as long as merchandising and manufacturing are such distinct and complicated functions, requiring such different human qualities and training for their successful management, that way will be a long one.

Causes of Wool Fabric Merchandising Evils

By Vernon E. Carroll

Developments in Primary Markets Result of New Methods in Cutting-Up Trades—Details of Change from Commission-House Plan to That of Selling Direct—Possibilities of Catering to New-Style Clothing Houses Aided by Changed Trend in Fabric Demand—Varying Views on Possibilities of Mill Combinations

A GOOD deal has been said and written about the ills from which the wool manufacturing and fabric distributing industry is suffering and the suggested remedies for these conditions have been numerous and varied. There is no question but that abuses in the sale of woolens and worsteds exist. In the distributing end the sanctity of the contract is conspicuous by its absence, while piracy, unwarranted competition, granting of unnecessarily favorable terms, return of merchandise and other uneconomic elements all go to make up a difficult division of the textile industry.

Always in a declining selling market practices which are not in accordance with correct commercial ethics are over-emphasized, but in more normal times these practices are automatically eliminated. Abuses which exist today are regarded as especially flagrant but judging from past experiences it will be surprising how completely these ills will disappear when the market turns in favor of the seller and free business is experienced.

Competition Keen During 1925

The year 1925 has not been an easy one for manufacturers or their selling agents. The radical fluctuations in raw material have at times given the hope that business would be profitable and free. This hope has almost always been dashed by a turn in prices that has proved unfavorable to manufacturing profits and has produced a species of competition that has tried the souls of selling agents to an extent that makes them skeptical of any permanent betterment of the situation. With all these untoward conditions there must be included the fact that the industry has only just recovered from the inflated conditions of war times. This fact is exemplified in connection with manufacturing plants. The exigencies of war demand and the difficulties of securing materials owing to disrupted transportation service, embargoes, etc., brought about a species of buying on the part of manufacturers which eventuated in abnormal supplies of almost every commodity that enters into the production of merchandise, as well as increased manufacturing capacity and surplus stocks of manufactured goods. It has taken a long time to recover from this abnormality. Manufacturers have been slow to appreciate the necessity of getting back to a plane of conservative operations and of economical direction of their enterprises. The point has been reached, however, in a great majority of instances where plants in the wool manufacturing industry are being conducted on a safe and sane basis, inflation has been eliminated and it is realized through bitter experience that profits incident to the unusual war conditions are no longer possible and probably will never again be witnessed, at least in this generation. Economies have been practised, and are being practised today, to an extent which justifies the statement that the woolen industry is running on a basis of conservatism developed to a high degree.

Selling Expenses Curtailed

A similar revolution has taken place in the selling end. It is coming to be realized more and more that the expense of selling men's wear and women's wear fabrics is something that has to be reckoned with, but it is also appreciated that much can be done to curtail this expense within reasonable bounds. There was a time 15 or 20 years ago when manufacturers felt that if they could get out of the hands of the commission house and sell their own goods they would do away with a very unwarranted charge in the distribution of their product. This resulted in the establishment of departments, many of which had lines from the same mill and competed against each other and also in instances against the manufacturer himself, who gained the mistaken notion that he could also sell the trade at the mill and eliminate the commission he was paying to various departments in the selling market. This went so far in one instance as to result in the appointment of 18 separate selling agents for one mill and the retention on the part of the manufacturer of a set of samples for himself, from which, according to his own testimony, he sold about 60% of his product. It soon became apparent that this system was both uneconomic and unprofitable. The buyer was shrewd enough to appreciate that he could jump on a train, go to the mill and obtain prices from the manufacturer that he could not begin to get from the various departments in New York that were representing this mill's product. The one thing that was not realized was that the manufacturer was not making any more profit by selling direct to the buyer than was the case when his whole product was sold through a commission house, for in order to make a sale he had to give to the buyer all the commission which he formerly paid the commission house and frequently something more.

Are Combinations Possible

The lack of economic stability and the lack as well of profit to the manufacturer eventually became appreciated with the result that important factors in the trade sought in combination a remedy for the evils which had been developed in this method of merchandising. This was the primary cause, as members of the trade now see it, of the inception of the American Woolen Co. The question has been asked whether the increasing competition and inability to right all the evils that exist in the selling markets are again to form the basis of negotiations for another combination or combinations of plants in the wool manufacturing industry. Those whose experience has included the time preceding the establishment of the American Woolen Co. feel that such a move would not be successful. They base this belief largely upon the premise that the financial end of such an enterprise would be looked upon with disfavor by banking interests. In spite of the tendency toward amalgamations and combinations in the industrial field, it is pointed out that textiles have received a black eye with the investing public and that it would be almost impossible to float a sizable issue, especially in the woolen industry. Bankers would not touch it because they know the temper of their customers and so the proposition is regarded as one which should be thrown into the discard. Dillon, Read & Co. may be able to sell securities in the automobile and cash register field, reaping an enormous profit for themselves and distri-

buting large issues without difficulty, but when it comes to textiles, particularly woolen, there is a most decided belief that this or any other banking house could not repeat their successful experience. This opinion is not shared by all in the trade for the feeling is that there are certain mills whose past performances could be demonstrated to be of sufficient value on which to base a very strong combination and that representations to financial interests could be made which would be bound to be interesting. Such combinations if projected would not in all probability be of the scope of the present amalgamation. There are those who do not believe in such a possibility, who on the other hand entertain the opinion that there may be changes in present combinations, with the idea of establishing more centralized units. Whatever may be the result of such belief, there is no doubt that the thought of changes is occupying a good many minds and developments will be followed with considerable interest.

Changes in Buying Trade

Changes in merchandising practice in the woolen and worsted selling markets have been the result for the most part of changes in buying and of clothing manufacture, as far as men's wear is concerned. A steady evolution has been taking place in the cutting-up trade. It has been going on slowly and without any blare of trumpets but steady progress has been made by concerns that a few years ago were negligible factors in the business, but who through progressive ideas have reached a point where they are large consumers of merchandise and are offering competition to the old line houses that is being seriously felt. No one believes that advertised brands of clothing are to go by the board and that all the effort and study which have been put upon this proposition are to go for naught. Nevertheless it is realized competition is so forcible that changes will have to be made in order to meet the prices of what were formerly small institutions, but which have grown steadily through up-to-date business methods until they are offering merchandise in the shape of clothing of such intrinsic value that the large overhead under which the well-known clothing manufacturers operate must be cut down or they will not be able to continue. How this will be done and how soon no one is willing to prophesy definitely, but the suggestion may be a pertinent one inasmuch as it is made by an authority in the trade who has studied distributing methods very carefully that combinations are likely to be witnessed in the clothing field, if not in the wool manufacturing industry, and that the combined purchasing power will go a considerable way toward cheapening the cost of doing business.

New Methods of Selling Clothing

With reference to the new methods of conducting the clothing business, in accordance with which manufacturers have had to change their methods of merchandising materially, it may be stated that there are practically five classes of cutters in the clothing trade who are competing successfully with old line houses and who through the development of new methods of merchandising have attained to very respectable size. The amount of merchandise consumed by these various classes, it is stated, is most surprising when the beginnings of these concerns are taken into account. One such class of operator is the clothier who sells direct to the consumer. He has a large staff of salesmen who ring door bells and offer the clothing to the ultimate user. Another class is the manufacturing clothier selling the retailer on unbranded goods, having stock always on hand and giving service which it is often impossible for the old line clothier to render. Another variation is the manufacturing clothier who sells the retail trade and specializes on one or two numbers. The price is usually the same year in and year out and there are no sacrifice sales and no slaughtering of the merchandise. This enables a guarantee that quotations will not be changed and the buyer is always confident he can get spot delivery of a specified type as he wants it. Still another class of distributor is the clothier who operates through a group of chain stores. Here also the plan is usually to specialize on a one-price suit, while a still further variation is the chain store proposition carried a little further and selling two or three types of merchandise in 40 to 50 styles.

While nearly all of these distributors have been successful, there are instances where individual chain stores have not accomplished the results expected. This, however, does not militate against the feasibility of the idea but is only an indication that it is not always possible to find district managers who are capable of making an enterprise the success it ought to be. There is also the question whether the restriction of merchandise made necessary by the price limits which these buyers will pay is a factor which will prevent an unlimited expansion of this class of trade. However, it is admitted that within the limits of buying to which such clothiers are confined they are able to offer merchandise to the retailer at figures that the old line houses are unable to meet, no matter how cheaply they may buy in the primary market.

Effect on Primary Market

This specialization in distribution has brought about the necessity of certain changes in the sale of merchandise, especially in the case of those concerns who are looking for volume of production. Selling agents have found it desirable to work with this class of trade in order to develop fabrics on which they can run and which in the form of suits can be offered at a price. They have discovered such effort has been productive of increased business on a less number of styles than is necessary with the old style clothing trade. The tendency of demand during the last few months has also helped in this direction. For a year or more the trend has been toward greater plainness in weave and pattern. Of course there are exceptions to this in overcoatings, but as far as suits are concerned the fancy element has been covered by variations in color and the ground weave has been of a staple character. Checks and plaids have been very much in disfavor. And now it appears as though the high colors were passing and that the demand for blue worsteds of the cheviot order was preliminary to a general request for sober and staple shades. This all plays into the hands of the clothier who can offer a one-price suit and sell in large volume. Those among the selling fraternity who have recognized the possibilities of this business and have catered to it have reaped the benefit. One selling agent is authority for the statement that his sales during the coming year to one concern alone, who make specialties of a specific type of clothing, on staples and semi-staples, will be greater than the entire business of his house to the entire trade three or four years ago. And this is one of the largest houses in the market.

Liquidation of Stocks

Perhaps it should have been stated at the outset of this article that the outstanding feature in the distribution of woolens and worsteds was the change brought about by the buyer himself with regard to anticipation of his demands. It is estimated the clothier today is buying at least four months nearer to the time of actual consumption of his clothing than was the case three or four years ago. This means that practically one-third of the merchandise and materials in the mill and in the buyer's hands has been liquidated and by so much the market is in a healthier economic condition. The manufacturer today who can operate his mill and keep his trade inquiring for merchandise because he is not in a position to ship goods as fast as his customers want them is in a most enviable position. And there are certain very important plants that are just in this shape at the present time. To be sure, as long as there is a surplus of machinery there will always be manufacturers hungry for business. But the instances where buyers come into the market and find that the goods they want are not to be had except as they are put into works are growing constantly. An illustration of this was the demand for blue worsted cheviots early in the fall. These goods were bought in large quantities when the season opened and just as promptly cancelled when the buyer became fearful that he would not sell the merchandise he had contracted for. The fad of the double breasted suit, originating in college circles, spread so rapidly that the buyer was caught unawares and the ensuing demand was supplied with great difficulty, while it was at its height, because manufacturers had not made up stocks as a result of the cancellations received on original orders. Those who have operated their plants with the determination always to be behind the trade in the request for merchandise are also determined never to go back to the old plan of accumulating stocks in the hope of eventual sale.

Two Types of Merchandising

Merchandising of mills today in the woolen industry falls practically into two classes. The one consists of a method by which the manufacturer having sufficient capital to do his own financing employs a sales agency, either his own organization or an established firm, to whom he pays a rate of commission based on the service rendered. The old rate of 7 and 8 percent has largely passed into history. Selling agencies today are taking accounts on which they do not have to do any financing and are furnishing the salesmen to distribute the product of the mill at as low a figure as 2 or 3 percent. The other type of merchandising consists of using a concern which will attend to the financial end of the business. Here is where the factor comes in and selling of the merchandise may or may not be connected therewith. There are very few old line commission houses left, in fact, practically none of the type that was in existence before the formation of the American Woolen Co. Many agencies own or control interests in mills which they represent and in addition sell for other manufacturers, charging, as stated above, either merely for selling or for selling and financing. What the future will witness in merchandising changes it is difficult to prophesy, but it would seem natural that as manufacturers increase their ability to finance their enterprises the plan of selling which is most prevalent today, namely through the manufacturer's own organization or through a selling house that has nothing whatever to do with the finances of the plant is likely to increase.

Hope for Future

There are many features in present day merchandising of woolens and worsteds which are discouraging to members of the trade. They see the evils and iniquities that have crept into the business and are frequently very pessimistic about their correction. Those who are truthful with themselves and take a dispassionate view of the situation believe the crying necessity of the industry today in the selling markets is the development of the power to say no. In other words, too frequently and in too many instances is the selling agent too supine in his treatment of the buyer. He recognizes he has a remedy in his own hands for the correction of many of the evils that exist, but has not the courage of his convictions or is too afraid of losing the business in competition that is increasingly keen to assert himself

when he is pressed to grant concessions which are not in accordance with good business or ethical procedure. Whether associations through codes of ethics or of practices can stiffen the backbone of the seller to the degree that is necessary in order to elevate the plane of merchandise distribution remains to be seen, but whether it is done through association effort or through individual initiative the fact remains that progress must be made in this direction if the whole scheme of distribution is to be conducted on anything like a satisfactory basis.

Is Women's Wear Following or Leading Fashion?

By William B. Dall

Merchandising of Wool Goods in This Field Complicated by Kaleidoscopic Changes—Seek Stabilization by Educational Publicity and Recognition as Style Authority—Bring Identity of Mill Before Consumer—Endeavor to Meet Demands for Quick Delivery

THE problem of sales methods in handling woolens and worsteds for women's wear on the primary market has always been, and is now more than ever, involved in the vortex of changing fashion. In days gone by when a storm serge was as staple as a loaf of bread, the producer merely had to meet the accepted price level and his goods would move, season in and season out. Of course, there were dull times, but after such times the stock carried through by the mill or the jobber was just as salable as it was before.

In the last ten years this simple situation has become highly complicated by the fading out of staple merchandise in favor of fancy goods, and in most recent seasons one series of fancies have fallen before another series of fancies with such amazing rapidity that the kaleidoscope of style changes has bedazzled the buyer's confidence so that he now limits himself to cautious hand-to-mouth operations.

Rapidity of Style Change

Before style changes had been speeded up to the present headlong rate, there was fairly orderly progression of fashion inspiration starting in Paris in one season, being taken up by the upper strata in the United States the following season, and becoming the popular mode for the masses the next season. At that time accurate knowledge of foreign styles gave a fairly accurate forecast of what American styles were to be a few months hence. In this present age of instantaneous communication between all quarters of the globe, these progressions have ceased to be gradual, and New York treads immediately upon the heels of Paris and in some cases may well be considered a stride or two ahead of that old world style center.

Tragedy often results where this quickened tempo is not recognized. The writer can recall the experience of a woman of conservative taste who, when abroad last spring, purchased a pansy purple dress from an authoritative and expensive modiste with the assurance that this color would be much worn in exclusive circles in the States during the autumn. This unfortunate woman returned to New York in June only to find everyone upon the streets wearing pansy purple and the store windows full of garments of this shade at prices frequently even lower than ten dollars.

In addition to the fluctuations of the all-important element of style, the mill catering to the women's wear field often finds its business subject to pronounced ups and downs probably due to that mill's inability to build up an established clientele among the actual consumers of its fabrics. The cloth manufacturer in the vast majority of cases has less identity in the mind of the ultimate consumer, than has the individual ranchman who raises the sheep, in the mind of the manufacturer who uses his wool. So far as the consumer is concerned the garment makers also remain anonymous. Garment houses are thus in a position to substitute any make of goods of a similar sort to those they had been using, without affecting consumer trade in any way.

To Stress Mill Identity

One of the aims toward which modern merchandising efforts in the women's fabric field are aimed, is the carrying of fabric identification through to the consumer. The advantages are obvious in that the credit for fabric quality is placed with the mill, where it belongs, and a definite clientele is built up for that particular mill's products. The fact that consumers are roused to show interest in fabrics from particular sources naturally develops demand from the retail store to the garment house for articles made from those fabrics.

Thus the mill man may establish a definite niche for his goods in the field of distribution which will probably mean not only gradually increasing business, but better still a stabilized business not subject to the on and off seasons of unidentified lines which garment makers may leave in the lurch without any one being the wiser except the mill agent who may be starving for orders.

For the most part publicity to the ultimate consumer has been utilized up to the present time only on the more expensive and more exclusive lines. This is a field where the identification of the goods is a definite benefit to the consumer in assuring her of her money's worth. Such identification would be of less interest in the fabrics going into cheap garments, since in the cheaper ranges there are a large number of manufacturers turning out goods of about the same quality, and the consumer would not be the loser if one of these was substituted for another. Of course there is a certain amount of misrepresentation, unintentional and otherwise in the retail garment field, which usually takes the form of describing an inferior fabric as the product of a high grade mill which has broken through the crust and made a name for itself among consumers. This is a detail to be taken care of by laws governing truth in advertising, trade mark rights and fraudulent misrepresentation in general.

Educational Publicity

An important part of the newer methods of selling women's wear fabrics concerns educational publicity. This is most frequently directed toward the mill's customers and prospects, but it is often expanded into the retail and consumer fields. It had been the experience of some mills for example, that garment makers were more mystified than enthused by some of the original products of the mill's designer. Much original material often went to waste because the garment marker could not catch the inspiration for its use. In a number of prominent instances the cure for this has proved to be an advisory bureau of fashion service which would help the mill's customers in sensing the general movement of style and in adapting the mill's product to style interpretation. This policy results in the issuance of considerable printed matter and a number of handsome booklets both with and without fabric samples and color plates have been issued by prominent fine goods mills during the last few seasons in connection with the development of educational publicity.

At the moment the industry is suffering from various forms of abuses such as returned goods, unjust claims, etc. Associated effort is being directed to bring about better understanding which may result in the elimination of most of these difficulties. While not directly involved with a mill's merchandising plan, these abuses are a great hindrance to progress since it cannot always be assured that goods once sold will stay sold. As buyers and sellers for women's wear meet in conference and clear up some of the ills of the trade, the way will be opened as it has not been for some time for the achievement of a definite success by a mill in true proportion to the effective sales effort brought to bear.

What Mills Have Actually Done

The steps which have actually been taken by several of the more important manufacturers for increasing their sales may be the basis for helping other mills to improve their work along this line. The great variety of their plans indicates that there is no one acknowledged panacea for the development of a big business in women's wear fabrics. One prominent mill has been carrying on an advertising campaign starting in the fall of 1924 with five page "portfolios" in two of the leading consumer style papers. This was supplemented by personal work to gain the cooperation of prominent retail establishments. In the fall of 1925 advertising was placed in papers going to the cutting-up trade which was coordinated with the consumer advertising. This mill also makes an attractive function of its seasonal openings.

Another manufacturer has established a special department in charge of an acknowledged expert on women's styles which keeps both customers and the mill well posted on the style trend. Interesting and informative literature is issued periodically. Another mill makes a specialty of issuing seasonal fabric books containing swatches of the principal fabrics together with the full color range. This mill formerly named its fabrics at the time of opening, but in recent seasons because of the plagiarism of these names, the new fabrics have been opened under style numbers and the names have been withheld for announcement after the season got well under way. This mill trademarks its names and takes particular pains to protect them.

A New England manufacturer who specializes on fine grade coatings and who has obtained an excellent reputation with the consumers has worked out a number of interesting ways for identifying its goods. For example, it weaves a white thread at certain intervals through the back of one of its coatings, and it supplies to garment makers little aluminum coins which may be hung from button holes in the finished garment, bearing in imprint the name and trademark of the maker of the cloth. This mill also takes legal steps wherever evidence warrants against dealers who misrepresent and infringe the company's rights to its trade names.

Another mill which has a particu-

larly large volume of goods to sell each season has recently been trying to make it easier for its customers to operate ahead by stressing piece dyes on which it takes orders in the gray with specification as to color to come later when the buyer has a clearer view of the sorts of colors he will want for the season and the proportion of each in his total order. Names are being more generally used on fabrics in place of style numbers.

The fabric and the garment trades although inseparably joined in the business of supplying clothing to the women of this country appear to have maintained a sharp line of cleavage. No mills have successfully established garment making departments nor has any garment maker taken over a mill. The exigencies of business sometimes result in the mill's selling agent having an interest in one or more garment firms, but there is no evidence that this is in line for expansion as a prime policy of selling agents.

Many Varieties of Trends in Cotton Goods

It has become a platitude to say that merchandising evolution of enormous significance will take place in the cotton goods business during the next ten years. Generalizations on this subject beat upon the ears of manufacturers from all angles. Yet it is difficult to be specific, for the tendencies which now seem obvious point in any number of directions, and occasionally seem to point in two different directions at the same time. This article outlines briefly what appear to be fundamental drifts in the selling end of the business.

IT IS easy enough to point out merchandising trends in the cotton goods industry. To place a finger on *the trend*, however, is something else again.

Influences now at work in this matter of merchandising point in any number of directions. Some of them seem to point in two directions at the same time. The student or the practical manufacturer looking for a simple formula in the so-called modern methods of distribution is quickly lost in a maze of conflicting ideas.

Best thought in the industry itself is by no means agreed as to where the business is going, in a merchandising sense, and how it is going to get there. The outsider is frequently less than helpful, yet it is not without the bounds of possibility that outsiders — those not primarily associated with the industry — will contribute some of the most valuable ideas on the subject.

Basic Tendencies

Briefly summarized, the important tendencies affecting the distribution of cotton fabrics seem to be:

An increase in the number of mills converting their own gray goods, with a possible extension of the idea to include the manufacture of certain types of staple ready-to-wear by the fabric manufacturer.

More appreciation of the value of brands, with trade mark identification maintained through distributing channels to the consumer.

Growth in advertising, both trade and consumer.

Distribution of a larger percentage of merchandise through the retailer, the mail-order house, the chain store and the cutter, and of a smaller percentage through the wholesaler.

Combinations of manufacturing, finishing and distributing units, with the primary purpose of effecting merchandising economies and improvements, manufacturing economies and improvements being of secondary importance.

An extension of specialty manufacture, with the development of selling points designed to lift the product above the general run of its competitors.

There are many more possibilities which could be included in such a list, but the above are more than sufficient to start any number of arguments. Men who should know what they are talking about insist there is no such thing as a trend toward mills' converting their own gray goods, not to mention entering upon the manufacture of garments. Others equally well informed state positively that national advertising has been tried and found wanting so many times that it is ridiculous to talk of expansion of cotton goods advertising to the consumer.

So there you are!

It is the purpose of this article to discuss briefly what we are pleased to call the trends outlined above. No attempt will be made to prophesy, point with alarm or advise.

Fundamental Causes

What has caused the rapid accession of interest in better distributing methods? Why all the talk, a considerable amount of it loose talk, about merchandising? Fundamentally responsible is the great increase in productive capacity during and immediately following the war. The industry is potentially overproduced; selling is more difficult; better sales methods are naturally sought.

Of hardly less importance is the enormous style swing toward novelties which has affected not only cotton goods, but also all other textile fabrics and clothing. Never have the consumers of the country been more interested in quality, novelty merchandise. Attractive novelties cannot be jammed through a mill and sold by the mile. A difficult re-vamping of selling ideas is going on.

Hand-to-mouth buying has made both manufacturing and merchandising more difficult; close buying, if not hand-to-mouth buying, certainly seems here to stay, under normal conditions. The introduction of rayon in a large way into the cotton goods business has been accompanied by a whole set of specialized problems, most of them manufacturing, some of them selling problems. Fast color guarantees, essentially a finishing proposition, has come to be considered almost entirely a question for merchandising solution.

To Convert or Not to Convert

And so it would be possible to go on and on. The field of speculation on which we have started has almost infinite possibilities. Ideas are not yet consolidated or crystalized. The merchandising development of the business during the next ten years is still in the making. We have got beyond our swaddling clothes, but the best informed merchants in the business would not be foolhardy enough to say that so-and-so will be true ten years from now, or five or even two years from now.

As an instance, consider the matter of a mill's converting its own gray goods. There are two sides to the question. Neither is entirely right. Examples apparently demonstrating the correctness of both are easily enough found.

The converter will probably always be with us. His contribution to merchandising has been large; it will not taper off into nothingness. But it is the firm conviction of extremely capable men who specialize on the selling end of the cotton goods business that the next ten years will witness a material increase in the number of mills converting their own gray goods.

The question of carrying this converting process a still further and logical step is a horse of a different color. A large New England mill is now experimenting with the manufacture of men's shirts from its own fabrics. Other experiments along the same general line have not been especially successful in the past.

Practical men to whom selling problems are the salt of life say that the two types of business—merchandising fabrics and merchandising garments—are so entirely different that no one organization or combination of organizations can handle them both successfully. And, they say, the type of brains which it takes to merchandise garments of whatever kind cannot be bought. It insists on running a business of its own.

But the theorists and the economists tell us that this combination of functions is an entirely logical one, so it is put down here as a possibility.

Branded Merchandise

The question of brands and their maintenance on fabrics until the fabrics reach the consumer and of national advertising are closely linked and may be considered as one. In this day and generation it is not possible to carry trade-mark identification through all the channels of distribution and to the consumer without national advertising. It has been done without mill advertising in a number of notable cases in the past, but the process is too slow for the man who is considering new selling ideas today.

Hardly anyone will dispute the advantages, for the manufacturer, of keeping his name on his product, building up a reputation and a business which will be his, not the jobber's, the cutter's, the retailer's or any other distributor's. But the difficulties of doing this often appear insurmountable. They are not, of course, for they have been surmounted, but in all too few cases. The road is a hard one which must be travelled against the determined or passive resistance of the rank and file of distributors of whatever class.

Whole libraries are available on the subject of national advertising. It is not good sense to dismiss the subject with a citation of the failures that have been made in the textile field. Mention might be made of at least a few successes.

It is a conservative statement that the textile advertising wrecks of the past have been principally caused by insufficient advance consideration of the merchandising problem as a whole, and the fitting of national publicity into a sound merchandising scheme. National advertising at best is a part, not a whole, answer. It must be treated as such.

A wider interest in the possibilities of intelligent, constructive national advertising campaigns on the part of important cotton goods mills seems to be in the cards for the next few years.

An Old Friend—The Jobber

Accurate statistics on the subject are not available, but there can be no question about the fact that a smaller percentage of cotton goods is sold through jobbers today than was the case ten years ago, or even five years ago. This is a difficult and dangerous subject. Important commission houses and mills continue

to pin their faith and their future on the jobber.

The reasons for what seems to be the waning influence of the jobber are numerous and complex. Inroads have been cut into his business by direct selling to retailers, by department store group buying, by increased volume of the cutting-up trades, the chain stores and the mail order houses. The world do move—backward or forward, according to your viewpoint.

The economic indispensability of the jobber, or rather of the wholesaler's function, is unassailable. The question is who is to perform this function in the future. Good students claim that the jobber must more and more confine his efforts to smaller, natural territories and to the smaller retailers in those territories. As long as the novelty vogue continues, and it promises to be with us for many years, it seems probable that the jobber will continue to lose prestige—and business.

The Combination Idea

Combinations are in the air. The combination idea has been applied successfully in many of the major industries of the country on a grand scale. In cotton goods manufacturing and distributing the ground has not even been scratched. It seems altogether reasonable that the next few years will witness the successful completion of combinations in this field. It will not be possible to form an organization comparable to the U. S. Steel Corp. overnight, but progressive steps in that direction are not merely figments of the imagination.

Arguments favoring combinations of manufacturing and selling units in the cotton goods business are built upon the demonstrated success of similar combinations in other fields. In another section of this issue is published an article by one of the most successful converters in the country, arguing for combinations of weaving plants, finishers and distributors. It is an interesting fact that this gentleman intimates that such combinations should be dominated by the merchandising end, his conclusion being that in future the merchant, not the engineer, will do most of the development work.

Specialties

It has been frequently declared of late that the big successes of the next few years in cotton goods will be specialties. Enterprising manufacturers are on a still hunt for such specialties, or for a means by which a specialty angle may be given to a product which is essentially a staple.

The subject is a wide one which does not admit of much generalization, but it is obvious that the mill which can set its product apart from the general run of competitive products by means of a merchandising "kink" will possess a tremendous advantage. Into this classification of specialties naturally fall special put-ups and packaging, in addition to distinctive properties which may be given to a product in manufacturing.

Packaging is unquestionably worthy of more attention than it has so far received from cotton goods mills. The idea has been successfully applied, but in a limited way, to such merchandise as blankets, towels, bedspreads, diapers, etc. It should be capable of considerable further extension.

"The Next Ten Years"

"The next ten years" is a phrase which has been frequently used in this discussion. To use it again, the next ten years will be an extremely interesting period from the standpoint of merchandising development, for the student, if not always so for the mill treasurer. The possibilities are enormous; the avenues of approach to secure business, sounder profits are almost limitless.

The character of the business has changed, is changing. We have apparently passed through the era, in many branches of the business, of grinding out large yardage at small but reasonably sure profits. The trade and the consumer are demanding new ideas, new fabrics, better quality, better design. More and different sales stimuli are needed.

Close buying, if not hand-to-mouth buying is here to stay. It has been ground into the retailer too strongly to be routed out ever in a buyer's market, and the normal market is a buyer's market. It calls for new or different manufacturing and financing methods; certainly for new and different selling technique.

A fair start has been made by individual mills in meeting the new merchandising demands made upon them, but for the most part the industry is still working in virgin territory. New selling ideas which will move goods over the counter consistently, and keep looms running regularly, are at a premium.

If you get one do not hesitate to hold out for $100,000, at a minimum.

Silks Sold Primarily as "Convenience" Goods

By William E. Spafford

Large Manufacturers Expend Little Effort to Bring Their Product Into Specialty Class—Situation Results in Sharp Price Competition and Substitution

THE extraordinary popularity that silks have enjoyed for the last eighteen months has caused the average silk manufacturer to lose sight of the many problems he was wont to complain of in less affluent periods. The most serious difficulty experienced for some time past has been to get the silk off the looms fast enough, speed up deliveries from the finishers and dyers, and to figure out plausible excuses for his customers for not delivering goods on time. The biggest problem that engages the attention of the silk trade was there nevertheless—the bogey of price competition. For some time past it has been obscured by steady increase in the consumption of silk goods but its workings have been just as sure as if the industry were engaged in one of its periodic orgies of price cutting.

Admitting the presence of the sharply competitive element in the manufacture of silks, it is interesting to stop and analyze the why's and the wherefore's of this condition. To encourage price competition it is necessary to have a great many mills all endeavoring to sell the same article, or practically the same article, to a limited market. That is precisely the situation that exists in the silk trade today and has existed for a great many years.

Scope of Demand Restricted

Though fashion is supposed to play an important part in determining the trend of demand, actually the manufacturing of silks has resolved itself into the weaving of five or six staples. The number of prominent fabrics might be increased to a dozen by the inclusion of some less important constructions. When one has mentioned crepe satin, crepe-de-chine, flat crepe, georgette, radium crepe, and the faille constructions, a considerable proportion of the output of the looms of this country is accounted for. Adding to the list the silk broadcloths, taffeta, plain satin, charmeuse, and one or two lesser lights, and in all probability 80% of the silk trade's production is included. This leaves roughly 20% for the more extreme novelties which is a fairly liberal estimate.

Trade Names Unimportant

These silks reach the consumer either by way of the cutting up trade in the form of made-up garments or directly over the counter in one to ten yard cuts. In selling yard goods over the counter, it would seem pretty safe to assume that an infinitesimal fraction of the goods sold is bought by the customer on the basis of a trade-mark name. Instead the purchaser buys, say three yards, of flat crepe or georgette or whatever the generic name of the material is. In the case of made-up garments sold by the retail store, even a smaller percentage is sold on the strength of the trade name of the material. The purchaser endeavors to gauge the quality of the material from her own experience or the question does not occur at all.

The answer to the price competition question would seem to lie in the fact that it is difficult if not impossible to market silks strictly as specialty goods. Rather they have come within the designation of convenience goods and are sold as such. At the present time it is hard to conceive of any purchaser of silks going out of her way to insist upon so-and-so's georgette. She goes in a store and asks for three and a half yards of georgette at about $1.25 a yard. If the store has it in the color wanted and the price and quality are right, the sale is made. A trade name does not enter into her calculations at all. So it is with the other staple crepes that comprise such a large proportion of the silks sold over the counter at the present time.

Competition Engendered

The result in the primary market is, as mentioned before, sharp price competition. With 1,000 silk manufacturers making a crepe satin which, of course, varies with each manufacturer slightly as to construction and finish, it is not difficult for the buyer to play one against another. The house offering the best value at the lowest price will naturally get the business. Just so long as Mrs. Consumer goes into a store and asks for georgette, flat crepe, or whatever the material is, will this condition exist.

Considering the vast number of trade names registered each year by silk manufacturers, it is all the more surprising that so little effort is made to acquaint the ultimate buyer with them. National advertising, however, is an extremely expensive procedure and must be persisted in to achieve satisfactory results. The medium size houses find it beyond their means entirely and even the very largest find it a serious drain. During the war years and immediately thereafter until the repeal of the excess profits tax, a number of the larger firms advertised extensively. At the time it was a question of building up good will and reputation or giving the money to the Government in the form of excess profit taxes. It is significant that in more recent years this advertising has been curtailed or done away with altogether.

Possibility of Specialty Goods

Under present conditions silks will continue to be sold as convenience goods and as such will continue to experience sharp competition in the wholesale markets. Whether they will always be merchandised in this manner is impossible to say. Many classes of goods that formerly were convenience goods have risen to the specialty class and the liking of the American consumer for trade-marked goods is well known. What development will eventually bring them within the specialty class cannot be foretold at the present time unless by process of amalgamation a dominant concern arises that will find its resources ample enough to develop a national market.

Combinations: A Cotton Goods Solution?

Consolidations of Manufacturers, Finishers and Converters Suggested as Major Development of the Next Few Years—To Follow Lines Proved Successful in Other Industries—Should Have One Directing Head, but a Measure of Independence Should Be Left to Each Branch of the Combination

An interview by Louis R. Keeffe with

Charles Pinnell

President, Fred Butterfield & Co., Inc.

The idea of combinations in the cotton goods business is not a new one, but the particular type of combinations suggested in this article has not been advanced before, to our knowledge. Mr. Pinnell is not an academic theorizer but a sane and successful merchant who has devoted his whole business life to the cotton goods business. He is particularly well qualified to express the best thought of the merchandising end of the business, and his ideas should be of particular interest to manufacturers at this time.

WHERE is the cotton goods industry going? Everyone connected with the business will tell you that it is on its way somewhere, but just where, is the question. No two men have the same answer, in all its details. No two or two dozen men can tell what the next twenty years will bring forth. That great changes in manufacturing and in distribution are in the cards is a platitude, but as to the probable nature of these changes there is nothing like unanimity of opinion.

It is fairly generally agreed, however, that it is the merchandising end of the business which will show the greatest changes in development because, comparatively speaking, the mechanical end of the business is in good shape. It is to distribution that we must look for a real and permanent solution of the gravest problems now confronting the industry.

Charles Pinnell

Charles Pinnell, president of Fred Butterfield & Co., Inc., a cotton goods converting house with a long and successful career behind it, has some interesting ideas regarding the probable developments in the cotton goods business during the next decade. He is well known to manufacturers as the head of an aggressive organization which has to its credit some of the most noteworthy merchandising successes in cotton goods during recent years. He is a liberal in a conservative business, a clear thinker, a fine merchant.

The Combination Idea

It appears to Mr. Pinnell that probably there will always be converters in the fancy goods business where style is paramount, because in that field individuality counts heavily and no one man or organization has a corner on new ideas. But in the items of large yardage he thinks that from present appearances the logical course of events during the next few years will bring about combinations in the cotton goods business which may be compared, in a sense, with those which have taken place, with *such great* success, in other major industries of the country.

"The thought of combinations of mill units alone is a familiar one (witness the plans that have been proposed for Fall River) but it is not this kind of combination that I am thinking about," said Mr. Pinnell recently. "My thought is a combination in which the merchant will do the development work—not the engineer."

These combinations, Mr. Pinnell believes, will be composed of manufacturers, finishers and converters under one management and they will distribute a finished product direct to the retail trade. Progress along other lines will march along hand in hand with the successful development of combinations of this character, in his opinion, *but the combination idea* will probably be the outstanding feature of the industry in the years immediately to come, and it appears to him quite obvious that many advantages and economies would result from such combinations.

One Directing Head

"I do not advance this idea of combinations," says Mr. Pinnell, "as an idea which is original with me, but it seems to me to be such a logical thing that we cannot possibly escape it. My ideas are perhaps little different from those of other men who are giving the matter serious consideration.

"The main purposes of the kind of combinations I have in mind will be the attempt to get as close to the consumer as possible, to eliminate wastes in distribution wherever possible, to bring fresh, new ideas in fabrics to the women of the country as directly, as quickly and as cheaply as possible."

"To be successful and lasting these combinations must perform an economic service of reduction in costs to the consumer, either through lower cost of manufacture or elimination of some of the wastes in distribution, and still pay a fair return on capital.

Photograph taken in March, 1896, of Fred Butterfield & Co. store at 725 Broadway, New York, showing large space devoted to woolen goods. Today not one yard of woolens is converted. What changes will the next 30 years bring in the converting business?

"I see no reason why combinations of this kind are not thoroughly practicable. There would be a tremendous amount of detail in connection with the organization work, but detail is a secondary consideration.

"The organization, to be really successful, would be under the final supervision of one directing head. The various units would have to be on a real partnership basis and the capitalization would have to be legitimate—in cotton goods there are no fancy profits to pay dividends on over-capitalization.

Operating Details

"The distributing end would of course undertake to do the major portion of its total business on fabrics made and finished by the combination. The manufacturing end and the finishing end on their parts would have to reserve the major portion of their output for the distributing end. But each one of the three should be permitted to do a portion of its business with outside interests in order that it would at all times be kept up to date and efficient and that the finished lines might be well rounded out.

"The manufacturing end would confine itself strictly to its job of manufacturing and the finishing division to its job of finishing, although both should be continually experimenting and suggesting new ideas from the mechanical side of the business. On the distributing end of the combination, however, would be placed the final say and full responsibility of styling as well as of distributing. A clear definition of duties in this way would certainly eliminate for each end of the business worries about matters which should be entirely outside of its province."

This is a sketchy outline of what it is believed will be a probable major development in the cotton goods business within the next few years. Mr. Pinnell emphasizes the fact that he is not trying to revolutionize an industry or to tell anyone how to run his business. As a merchant he naturally has the merchant-mind, and thinks first in terms of distribution. Numerous students acknowledge that this kind of thinking is most necessary.

Importance of Styling

Styling plays a more and more important part in the manufacturing of cotton goods and has to be visualized well ahead. No longer can a mill man rig up his looms and sit back with the assurance that the mill will run indefinitely. Good students have all along preached the doctrine that the basic trouble with the business was an unbending stiffness on style matters, lack of appreciation of the style changes which have swept the country during the last ten years.

"A piece of goods must be mixed

with brains these days," says Mr. Pinnell, and there is much more in this simple statement than appears on the surface.

Just where the jobber fits in the future scheme of things is a question which is beyond the scope of this article. This will be decided by the ordinary course of events.

Garment Manufacture No Solution

Mr. Pinnell has no sympathy with the theory that a solution of some of the distribution difficulties in the cotton goods field rests in the manufacturer of fabrics engaging in the cutting-up business. He believes that the two types of business are so thoroughly separate and distinct that no one organization can handle both of them.

It is interesting to record, the subject having a proper place in any discussion of style merchandise, that Mr. Pinnell, along with the more conservative elements in the trade, is not yet thoroughly sold on rayon fabrics, because he believes there are still many difficulties to overcome.

This opinion is naturally of only incidental interest in the main problem which has been the subject of this article, but it may be considered a healthy antidote for the somewhat hysterical faith that has been placed in rayon by some mills. The mere introduction of rayon into the line does not constitute a solution of the problem.

The Human Element

Finally, it is particularly interesting to put down here the fact that Mr. Pinnell, a practical business man who has come up through the ranks in the organization which he heads to-day, places principal stress on the human element in the matter of properly handling the problems which confront the cotton goods industry. In the last analysis, it is men, the right kind of men, who will find the way out of what some may consider a hopeless labyrinth of interests and cross interests.

We have not given enough attention, he thinks, to this human element.

Turn over in your mind this thought of Mr. Pinnell's: Inasmuch as the problem is apparently one of distribution, the merchant will develop, not the engineer.

Economics and Textile Merchandising

A Concise Statement of a Few Fundamentals to Keep in Mind—and Two Definite Suggestions

*By Louis Bader**

In analyzing the problems of the textile industry, so far as merchandising of goods is concerned, Mr. Bader speaks both as an economist and as a member of the trade. He has had long experience in the cotton goods selling field and has also studied the situation from a theoretical standpoint. His writings in previous issues of TEXTILE WORLD have been the subject of much favorable comment.

It is interesting to note that he offers two suggestions: Market research and advertising. Both of these solutions have been in the forefront in other discussions of the problem.

THERE is a striking phrase in economics termed "The Paradox of Value." It is used by the economist to describe a condition with which we are all familiar, although frequently the realization of that condition comes all too late. The condition this phrase refers to is, that, as the total quantity of a good increases beyond a certain point the total price of the entire quantity decreases. We can see this clearly in the case of cotton crops. When a cotton crop of 8,000,000 bales is grown and sold at say 40c per lb., the total price realized is greater than when a 16,000,000 bale crop is grown and sold at 18c per lb. and similarly with a clip of wool. Because of many cross-currents this is not so apparent when we consider products manufactured from cotton and wool. Nevertheless the paradox of value comes into play on every product, under conditions approximating free competition, when a good increases in quantity beyond a certain point.

Take any product and, given a certain demand, the smaller the quantity the higher the price, but as the supply increases the price per unit diminishes until the total price is less for the larger quantity than for the smaller. This is because of the well known fact that the individual desire for a good diminishes as one comes into possession of an increasing number of units until a point is reached, as when satisfying our hunger, another mouthful would serve no good purpose other than, perhaps, to make possible a doctor's bill. We then want no more food, no matter how low the price.

This is all part of the great practical question of *value* which bulks so large in the theory of economics (the study of business).

While we know much of the subject matter of the theory of value, we need occasionally to refresh our minds about the part it plays continually in the market-place. As we have seen, it may be very clear to us when we consider the farmer and his crops, but many of us are inclined at times to say such a condition does not apply to our own business. We manufacture a textile product and we know very definitely what our costs of production are. We say we will offer our product in the market-place at a price which will return that cost plus a profit. If we are particularly fortunate we may even put the price on the basis of all the traffic will bear.

When we reason that way we have lost sight of the great fundamental fact that production comes into effect because of the demand for a product and the price the demander is willing to pay arises because of the value he places on the utility of that product to satisfy his desire. It is apparent then that the price paid is not because of our costs of production, but our costs of production are because of the price. Of course the price paid must equal your costs of production and also pay you a profit, otherwise you will stop producing.

This then suggests the final element, perhaps the most important, entering into the evaluation process going on in the buyer's mind which enables him to arrive at a value on which to base the price he is willing to pay. This element is scarcity. If a product is not scarce, we would not attribute a value to it and then it would not command a price.

Now, perhaps, we see a little clearer what *value* means to us in relation to the product of our mill. Let us consider a few illustrations to get an even better view of this conception of the general economic term *value*.

Illustrations of "Value"

A great many sheetings are being produced by a number of mills working independently of each other at a cost of say 40c per lb. Since the mill treasurers usually do not know how many sheetings the market will require during the next year many more are oftentimes produced than are necessary to fill the demand existing at that price. If the mills want to sell all of the sheetings produced for that period, it is obvious—and our daily experience confirms it—that all of these sheetings cannot be sold at 40c, even though that is the cost.

Similarly a short while ago several large mills were rigged throughout their entire organization to produce ginghams, and, anticipating demand, millions of yards were produced. But about that time consumers stopped demanding ginghams in a large way and they could not be moved into consumption even though the cost was 50 or more cents a pound excepting at a price considerably lower than the cost. The gingham producers had to take losses running into the millions during one year.

In Hudson County, N. J., the embroidery business took root some years ago, grew large and profited enormously, reaching a production of more than 85% of the total manufactured in the United States. This was a fine business so long as the consumer demanded embroideries. Since the ending of the World War this industry has been flat on its back and even the investment in machines and buildings to house them is now an economic waste because of lack of demand.

Illustrations almost as unfortunate could be cited from the experiences of mills manufacturing staple and fancy cotton-warp worsted-filled dress goods. In fact mills manufacturing fancy dress goods, either cotton or wool, are almost perfect examples of how little influence the costs of production play in fixing prices. These mill owners well understand a paraphrase of the statement made by one writer some years ago: "All the costs in Christendom can't fix the price when goods are not wanted."

Fundamentals of Economics

Enough has now been said to indicate that the textile merchant ought now and then refresh his memory so as to have clearly before him at all times a few fundamentals of economics if he is to develop a merchandising plan for selling a mill's product at a profit. These fundamentals are in part:

1. The desire for products of varying kinds is individual. From this follows:

2. The individual arrives at the price a product is worth to him because of the utility the product possesses to satisfy that desire.

3. The product must be scarce and the greater the scarcity, or the greater the difficulty in securing the article, the higher the value rises in the individual's mind and the higher the price he is willing to pay, provided his income permits. And vice versa, the larger the quantity existing or produced, or the easier it is to secure the article, the lower the value is apt to go in his mind and consequently the smaller the price he is willing to pay. Theoretically, this devaluing process might go on until the point is reached as in the case of air or the sand of the seashore, where it has no value to him and so can command no price.

4. The bulk of the country's purchases are made by our wage earners. The continuance of

* Author of "World Developments in the Cotton Industry."

prosperity depends very largely on the ability of the wage earner to buy. His ability to buy depends on his income and this in turn depends on production. If production is large his income can and ought to be large if the large production is to be consumed. Lack of ability to consume on the part of large masses of wage earners helps to cause crises and depressions.

We are living in a money and profit economy and so one may well say we ought to produce only so many of each good, create an obvious scarcity and always enjoy a high price for the various products of our mills. Two difficulties, however, stand in the way. One difficulty is that stated by Smart, the English economist: "The incessant effort of the industrial world is in the direction of bringing all goods nearer to the category of free goods." The second is the difficulty of deciding, as Turner puts it, "who is to produce the smaller quantity, or shut down altogether, and thus increase the price for his competitors at his own expense." Perhaps the English cotton industry is a classic example of this right now: Short production now because the East won't pay present prices, and the East is developing its own industry, making the English industry almost unnecessary for their needs. In addition to these we might find the Sherman anti-trust law stepping in to add to the difficulties of the situation.

The Real Problem

Now we come to the problem, too large production, which has faced the cotton and woolen industries off and on for the last, let us say, 15 years with the prospect of being with us for a few years longer. This problem has probably reached its present importance because of the failure to keep clearly before us the fundamentals of economic science together with the failure to set up adequate machinery for keeping in touch with world developments in the textile field. Problems, however, arise to be solved and, by concerted effort—thinking along this line and that—a solution will ultimately be found. In attempting a solution of this problem I would offer for the consideration of these two industries the following two suggestions which seem to me to be vital to the settling of this problem:

Market Research

The first of these is RESEARCH—Market Research. These industries need to know what is wanted by the consumer, when he wants it, how badly he wants it, what the producer is doing to meet this demand, what are the best channels of distribution, and how these can be improved upon. We have arrived at our present status in distribution largely by trial and error. Perhaps through intensive study we can arrive more quickly at a greatly improved position. This information is also vitally necessary if over a long period profitable prices are to be secured, and if the enormous wastes resulting from the accumulation of surplus stocks and changing styles are to be eliminated. A large expenditure of money might have to be made to secure this information, but an industry like the cotton industry with, at a conservative estimate, more than five billion dollars invested in its various operations, could alone well afford the necessary expenditure. Then, too, no one mill or commission house would or could undertake the job. It should be done by each industry as a whole or by both together for the benefit of each individual commercial and industrial organization in it and the task ought to be undertaken by an impartial organization especially equipped for that kind of work.

Use of Advertising

The second suggestion is: Make an investigation of the desirability of the use of advertising either for the individual product or for cooperative action by each industry.

The chief economic function of advertising as stated by Hotchkiss is not so much to create demand—its power in that direction is very limited—as "to educate." The demand already exists; the advertising "educates" the consumer to a realization of the existence of the product, its good qualities and the uses to which the product can be put. Textiles have so far defied efforts to mark them for identification, and without identification the individual mill that would advertise its products will hardly find it advisable. Until a mill takes the big step of producing from out of its product an article which can be identified and advertised direct to the consumer as is now being done with some brands of sheets, pillow-cases, bedspreads, blankets, etc., it's wasting money to do consumer advertising.

The cotton and woolen industries, each as a whole, ought and could do some advertising with a resulting profit. Consider: The consumer's income is just so many dollars and it can be spent only once. If radios, automobiles, silks and furs, heavily advertised and at the moment the fad, take so much of that income that only enough is left to to buy the necessary food, pay rent, go to the movies the allotted number of times a week, with only a minimum amount left for an occasional shirt and pair of socks, a bed-sheet and one suit of clothes, the demand for cotton and woolen fabrics so falls off that many spindles and looms must stand idle a considerable part of the time and cause losses to the owners.

The cotton and woolen industries compete with silks and furs and many other products, for the consumer's dollar. Advertising of the right kind might help secure a larger demand for cotton and woolen fabrics and in this way secure a larger share of the consumer's income. Advertising is of two kinds, the right and the wrong. The right kind through education and the creating of prestige has been instrumental in helping to build some successful hosiery, underwear, and silk concerns. Can't we expect it to help cotton and woolen textiles to solve its problem of securing better distribution at more remunerative prices?

What "Tradition" Means

All of this you may say is simple and you know all about it. But sometimes it is not so simple as it seems. To illustrate, lately we have heard much about the hidebound policy of New England mills to follow tradition. The attitude is conceived of as "what was good enough for father is good enough for me." One would imagine that to know what is traditional and to follow it is a simple matter. Yet to say that New England industry is hidebound traditionally and for that reason is having troubles of her own is far from the truth. If New England had followed tradition her industries would still be leading the country. It was traditional with the old New Englander to keep an open mind and grasp those new processes and machines which their bright minds were continually inventing and use them to the fullest extent.

Take the case of textiles. In the early days textiles were imported when not home-made. Finally we started manufacturing them in New England. Soon thereafter the Lawrence Bros. gave up the importing business and grasped the opportunity of developing the manufacturing and distribution of textiles in the United States. They were but typical of New England of their time. The New England producer invented and used new machines and methods until our mills and factories led the world in efficient production. That was their problem to produce goods at prices that would tap the lower levels of demand. The country was growing and could use all they could produce at the different price levels. Today we face a different sort of a problem. The problem now is one of distribution and if New Englanders had continued to follow their traditions they would have developed and grasped new methods to make their distribution of products more efficient and in this manner solved their problems and continued to lead the country.

The textile industry in New England and the South needs to develop to the nth degree the scientific spirit, to hold the mind open to new ideas, and they will then have found the formula to a solvent which will solve many of the problems that continually arise in an industry like theirs.

Summary

Since profit is the mainspring of our business action, I would repeat let us:

1. Keep fresh in our minds the fundamentals of economics, those immutable laws of business, the breaking of which result in business disaster;
2. Because of the size and number of our activities, conduct adequate research in marketing and production, so that we may more readily conform to economic law, and
3. Investigate the possibilities of advertising, so that we may take proper advantage of a tool, developed by modern business, which has proven itself to being the quickest and most economical way of transporting ideas to large numbers about our products.

Merchandising Statistics Needed

By S. F. Dribben
Cone Export and Commission Co.

THE experiences of the past year have left their impression on the industry in a way that makes clear the need for readjustments both as to production and distribution.

It is quite apparent there is an over-production in the cotton textile industry—more noticeable in some divisions than in others. The need for constructive cooperation in connection with reasonable and judicious curtailment of production is quite apparent to those who must bear the responsibilities of mill management and distribution.

A great deal has been accomplished in this direction during the past year, by cooperative contact within the market itself, but a great deal more can be done by building on what has already been started.

Night operation further tends to aggravate this situation, and while this additional production at times is needed, in the long run it reacts against the welfare of the industry as a whole.

In my estimation, it would prove helpful if there were available some source where there would be compiled figures showing the production and consumption of cotton fabrics. The industry is now working very much in the dark on this point. The decision of the Supreme Court in the past year, permitting the collection of data of this sort, if taken advantage of and developed, would go a long way towards eliminating many of the problems which have confronted the industry during the past year or two, and would have a beneficial effect on all.

Stocks generally are low, and when full figures are available showing inventories as of December 31, 1925, I believe they will reflect smaller stocks in the hands of cutters, jobbers, retailers and mills than have been shown for many years.

With conditions industrially and agriculturally in excellent shape (except in one or two restricted areas) and world finances better than they have been for some time, all indications point to good business for the coming year.

A Few Salient Textile Marketing Problems

Peculiarities Individual to the Industry, Which Call for Special Treatment—Financing Largely Done by Selling End—Great Increase in Productive Capacity Coupled with Reduced Consumptive Ability—Has Created Problematic Situation Calling for Drastic Changes in Marketing End—Buyers' Market Likely to Continue

By Paul T. Cherington

Director of Research, J. Walter Thompson Co.

THE textile industries of the United States have worked out their selling problems on a basis different from any other group.

The iron and steel industry, for example, grew with the expansion of the railways and the other great industrial outlets for steel. Improved equipment and new raw material sources met the demands of a naturally growing market. In similar fashion the agricultural implement business grew out of the shortage of farm labor and the market was made conscious of its needs by a highly organized form of aggressive selling. This implement business is attributable to forcing new devices upon the attention of buyers who, while discontented with old hand-work conditions were only slowly persuaded that machinery of this kind offered a remedy. The problem was somewhat different from steel-marketing, but it was worked out from within. The automobile (which is only partly a labor saving device) has had a similar experience with its efforts to keep markets in balance with the growth of production equipment. And so it has been, also, with new food products and kindred products for consumer purchase. All of these, in this question of preserving the balance between supply and demand—expanding the one that needs it and bringing the other into line when it falls behind—have shown great skill; and usually this has been accomplished by drawing on capital from within the industry, or put into it directly from outside for this specific purpose.

The textile industries are unlike most of the others in several particulars from among which we shall choose three for brief consideration:

1. Production has been financed largely by the selling end of the business.

2. The textile market has changed its character to a revolutionary degree within a few years.

3. Production capacity has far outrun the state of demand.

Financed by Selling End

The peculiar form which the connections between American textile mills and selling houses have taken is attributable very largely to historical influences. The introduction of power machinery into the textile industries of the country made a new draft on capital. This new capital was needed for covering the cost of materials in process and finished goods unsold, and for the extension of the necessary credits to customers. Capital was available from but one domestic source—the merchants. Most of these were mainly engaged in doing an import and export business. This trade was seriously curtailed by the Napoleonic War and the American Embargo and War. This interference made the merchants glad of new openings for safe and profitable investment of their capital. This change was further accelerated by the succeeding periods of financial stringency.

One instance, showing by what natural steps a merchant first invested in a mill and then became involved in disposing of its product, is found in the case of Nathan Appleton, a retired merchant who became a partner in the Boston Manufacturing Company in 1813. The company bought a water-power in Waltham, Mass., and started a cotton mill. In the following year (1814) Francis C. Lowell, one of the partners in the company, completed a power loom which he had built from such knowledge as he could glean concerning British power looms then still in an unperfected stage.

Mr. Appleton, himself, tells how he became a cotton-mill commission merchant:

> "After the peace in 1815, I formed a new copartnership with Mr. Benjamin C. Ward. I put in the capital for the purpose of importing British goods, with the understanding that I was not to perform any part of the labor of carrying on the business. I was content with a moderate fortune, but not willing to disconnect myself entirely from business. An accidental circumstance occasioned the continuance of the copartnership until 1830.
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> "At the time when the Waltham Company first began to produce cloth, there was but one place in Boston at which domestic goods were sold. This was a shop in Cornhill kept by Mr. Isaac Bowers, or rather by Mrs. Isaac Bowers. As there was at this time only one loom in operation, the quantity accumulating was not very great. However, Mr. Lowell said to me one day that there was one difficulty which he had not apprehended, the goods would not sell. We went together to see Mrs. Bowers. She said everybody praised the goods, and no objection was made to the price, but still they made no sales. I told Mr. Lowell, the next time they sent a parcel of the goods to town to send them to the store of B. C. Ward & Co., and I would see what could be done. The article first made at Waltham was precisely the article of which a large portion of the manufacture of the country has continued to consist; a heavy sheeting of No. 14 yarn, 37 inches wide, 44 picks to the inch, and weighing something less than three yards to the pound.
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> "That it was so well suited to the public demand was matter of accident. At that time it was supposed no quantity of cottons could be sold without being bleached; and the idea was to imitate the yard wide goods of India, with which the country was then largely supplied. Mr. Lowell informed me that he would be satisfied with twenty-five cents the yard for the goods, although the nominal price was higher. I soon found a purchaser in Mr. Forsaith, an auctioneer, who sold them at auction at once, at something over thirty cents. We continued to sell them at auction with little variation of the price. This circumstance led to B. C. Ward & Co. becoming permanently the selling agents. In the first instance I found an interesting and agreeable occupation in paying attention to the sales, and made up the first account with a charge of one per cent. commission, not as an adequate mercantile commission, but satisfactory under the circumstances. This rate of commission was continued, and finally became the established rate, under the great increase of the manufacture. Thus, what was at the commencement rather unreasonably low, became when the amount of annual sale, concentrated in single houses, amounted to millions of dollars, a desirable and profitable business."

The relations between production and selling ends of the textile business have undergone many changes since Appleton's day, but the fact still remains that this industry is peculiar among those of this rapidly expanding country in that, in a large measure, the selling house has had an unusual degree of financial, industrial and commercial control, over production.

Outstanding Changes in Markets

The growth of the cutting trades during the last few years, and the rise of department stores, are among the influences which have revolutionized the market for textile products. These selling houses, many of which had been importers, sold successfully to wholesale dry goods merchants. And some of those older merchants' customers were real ones. They would buy a mill season output with the nod of a head, and pay for it in due time without a quiver. But the wholesale dry-goods merchant of the old type disappeared with the development of department stores; and the rise of the cutting trades for both men and women and for both outer and underwear brought in a new set of buyers—the cutting houses. These were operating, very often, on inadequate capital and were making a product with a large element of style in it and hence highly speculative.

Another change which affected the volume in certain lines of mass production was in the curtailment of some and the loss of others of our export markets.

All of these changes and others of a less spectacular nature served to revolutionize the character of the market to which the selling house sold the products of the mills. And at the same time every change of this sort has intensified the speculative effects of style changes. A live style is more insatiably active and a dead one more irrevocably dead than ever before.

Excess of Productive Capacity

The over-expansion of the textile industries in this country is undeniable. The reasons for it are highly composite and no one of them deserves all the blame. But some may be touched on.

One important factor is the apparent lack of realization of the degree to which fibres cut into each other at times. The rayon business is a newcomer. The knitted wear business was a novelty a few years ago and still is an important industry making wearing apparel. In the same way many of the southern cotton mills and the huge and presumably economical units in Lowell, Lawrence, Manchester, New Bedford and Fall River represented new production capacity for textiles as a whole. And all of these were makers of products which, in some measure at least, meant direct, new competition for the going equipment. The degree to which these huge expansions were absorbed is marvelous, but nevertheless they outran, in the aggregate, our ability to consume their output.

But even more important than these expansions of production have been the checks on the expansion of consumption. The ready-to-wear business consumes textiles in huge aggregate quantities, but the yardage per garment probably is less than for tailor cutting or home dressmaking. This saving, however, is nothing compared with the shrinkage in con-

sumption of textiles due to the increase in heated homes, offices and vehicles, and to the vagaries of fashion. A generation ago neither men, women nor children would have been regarded as adequately clothed if they wore no more than they do now; and they doubtless would have all contracted some mortal disease due to long continued chill. More than enough textile fabric to clothe completely a modern flapper was used by her grandmother in skirt trimming; and nobody went about in heated vehicles when those trimmings were in vogue.

On the side of supply there are thus seen to have been a number of forces resulting in over-equipment, while on the side of demand not even the normal growth of population has been able to offset the shrinkage in the net weight of fabric clothing worn.

The result of all these influences may be summed up in a few words. Mills (still selling through a mechanism and under selling conditions built up to take care of a sellers' market) find themselves unable to move their product in a buyers' market. They still have their "openings;" cotton manufacturers still regard 2% as a proper selling expense; they still have their sales rooms equipped and manned as if they could sell a year's run in a week, and they still feel that the chief value of a brand or a "good name" is for impressing stockholding "widows and orphans." Unless all signs fail, textiles will be sold in a buyers' market for some time to come; and future success in the business apparently will depend on the degree of recognition of this fact. The big prizes will go to those who most skillfully direct demand their way.

Problems in Woolen Industry Appear Many-Sided

Separated Into Manufacturing and Distributing Divisions They Comprehend Questions Which Have an Interlinking Relation—The Prosperity of Either Depends Upon Similar Prosperity of the Other—Preliminary Cooperative Measures Taken by Manufacturers and Sellers which Give Promise of Encouraging Results

By Herbert E. Peabody

Field Secretary of American Association of Woolen and Worsted Manufacturers

PROBLEMS of the woolen industry are two-fold, and are fairly evenly divided between the production and distribution branches. The majority of them are so deeply intrenched by long sufferance, that it has become difficult for the average person engaged in the industry to believe their eradication or even diminution can be accomplished.

And in that fact lies perhaps the greatest problem of all; how to get those concerned into the habit of meeting with one another for the purpose of discussion of subjects common to all in order to obtain mutual benefit and relief.

The present is a period of organization in all lines of industry, and in all branches, from the wage earner to the producer. People who have taken the first steps toward co-operation quickly appreciate its value, and soon learn that stabilization of existing conditions, or their amelioration, can only be accomplished by collective and co-ordinated effort.

Organizing in Both Divisions

This industry is now taking a first step, and by the organization of groups of manufacturers in various localities has already begun meetings which have been interesting, instructive, and full of promise for future results.

So also have those engaged in the distribution end begun to organize similarly, and in the meetings of sales agents recently held in New York at the rooms of the American Association of Woolen and Worsted Manufacturers, frank and searching discussion, which promises to develop into concrete action was an encouraging feature. Therefore, it is believed that a campaign of education and exchange of experience has now been definitely inaugurated that will eventually lead the industry out of its prolonged static condition, to that of progressive action and accomplishment.

Problems Affect All

As indicated, the problems of the industry divide themselves into those which are more intimately connected with the manufacturing end, and others which arise in the sale and distribution of the product. Here again a problem is encountered in the fact that up to the present there has not been sufficient recognition of the fact that what affects either of these branches, has a most direct effect upon the other.

Production and distribution are but two parts of a whole. If either is unsuccessful, the other must of necessity fail in its endeavors. It is not only essential that goods be properly manufactured and kept rigidly to standard if a permanent reputation and a long-run demand is to be established, but equal care must be taken to create a reputation for square dealing in their distribution, if it is expected to hold the purchaser of these goods to full recognition of the responsibilities of his contract.

The Shoemaker and His Last

In the majority of cases in our industry, the manufacturer is, in the last analysis, both the producer and distributor. If he does not actually direct the sales office, he at least fixes prices and controls the policies and in many cases, failing to recognize the paramount importance of the proper merchandising of his product, he intrusts that work to one not adequately equipped or sufficiently trained, or else himself undertakes that with which he has had but little experience.

In most industries, the two branches, production and distribution, are recognized as separate departments, requiring totally different preparation by way of training and experience. It is exceedingly rare that an individual combines the qualifications necessary to conduct both branches successfully. Therefore, two or more persons are selected, the duties of each being clearly defined, and the responsibility in consequence easily placed. Recognition of the essential fact that to be successful, each must support and augment the other's efforts ties them closely together, and produces harmonious co-operation; or failing which, changes are made until that result is accomplished. Wherever permanent and successful results have been obtained in our industry, such a plan or one similar has almost invariably been employed. The failure to adopt such method more generally undoubtedly contributes to the industry's problems and present conditions.

Herbert E. Peabody

Correct Information Necessary

Another problem equally affecting both branches of the industry is lack of information. No wide-spread or general attempt has been made by research work to establish processes or machinery that would tend to eliminate waste, and lower costs of production, nor has any general study of the field of distribution, style and fabric trends, or average consumption figures been made. Other industries with no greater output in dollars and cents than our own, spend hundreds of thousands in research work, and feel themselves obliged to acquire all possible information and data to assist them in the profitable and economical management of their manufacturing plants and sales departments.

The character of demand in woolen fabrics is constantly changing and calls for the use of new materials and processes. The sale of such fabrics for men's and women's wear for some time to come is likely to be governed by the restricted methods of purchase now in vogue. It is probable that competition for the business under these conditions will be increasingly keen ultimately obtainable only by such as are adequately equipped and informed, and who conduct their business affairs upon progressive lines. Therefore, it would seem that our industry is confronted with a situation which may compel a reorganization of both the present manufacturing and selling policies and methods in order to conform more closely to the radical changes that have already taken place in demand and purchase.

The Every Day Problems

But these problems are broad and general, having to do with fundamental causes. There are others, known to all, of daily repetition and discussion, which are so constantly in evidence as to focus the attention of those concerned to the exclusion of the larger subjects above alluded to; and indeed these latter are sufficiently serious, and of such disastrous effect, as to clamor for immediate and drastic action. The abuse of contract, cancellation evil, unjust claims and returns, faulty methods of examination and sponging, unfair competition, under-selling, the cheapening of fabrics, and piracy are but a few items of a list sufficiently formidable to present an appalling aspect, and they are all problems yet to be solved.

Furthermore, their daily recurrence is partly responsible for the slump in morale in our industry that today exists to a deplorable extent. Time was that those engaged in the industry were proud of the fact, and conducted their business affairs in a frame of mind and with an attitude that compelled respect. Those of whom that can be truly said today are the exception rather than the rule.

But the fact that there still re-

mains a nucleus of those who maintain the old time pride in the industry is an assurance that their example can be made to act as a leaven for others, when once woolen manufacturers and sales agents learn to get together and become imbued with the desire of co-operative effort for their mutual benefit and the uplift of the industry.

Cooperation a Modern Remedy

There is nothing theoretical about the propositions that have been made of co-operative effort, or of the methods to be employed in the solution of the problems herewith enumerated. The program outlined at the annual meeting of our Association, embracing a Code of Ethics and a Code of Practice, in addition to the existing machinery, is based on actual experience and needs no experimentation. Its sole requisite is the imperative need of an awakening by the personnel of the industry to the fact that the methods of individualism, secrecy and distrust, and the antique policies and machinery handed down by our predecessors, now used on the theory that "what was good enough for them is good enough for us," are no longer adequate to cope with changed conditions. They have no place in modern business, and have not only become ineffective, but present actual obstacles to progress.

Progress by Cooperation

To close this article, the following excerpts taken from the monthly letter of the American Exchange—Pacific National Bank, seem apropos:

> "Possibly many of us do not yet appreciate the really revolutionary things that have been introduced into business practices in the last year or two. Of the new practices none is as revolutionary and as effective in producing stability as the practice of fitting production to consumption. This change has not been an easy one to make and it still meets opposition even from those who are benefited, but the new method has proved itself so thoroughly that it seems impossible to believe that the system of haphazard production which was followed so long will ever be revived."
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> "This achievement has been made possible by the closer co-operation of producers, and the continuance of this co-operation is now assured.
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> "In the past, attempts at driving producers into the acceptance and adoption of the principle of co-operation have not been very successful. Success in co-operative movements is dependent upon the spirit that animates the co-operators. Ignorance of the benefits to be drawn from co-operation presents a formidable barrier to the advancement of the movement, but the rapid gains that have been made in the application of the principle to industry have been made possible by the growing appreciation among industrial producers of the great value of the method. In time, all producers will perhaps realize that co-operation is not only desirable, but necessary, inevitable. Faced by a growing tendency toward concentration of buying-power into purchasing co-operatives or other forms of centralized buying, the producers must join forces or become the victims of circumstances created by men of greater vision."
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> "In time, of course, co-operation will have become general. It represents an inexorable movement toward a higher form of industrial organization which it would be folly to oppose."
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> "The co-operative movement has a greater significance than the mere protection of the interests of individual producers. It fosters research, it eliminates waste, it improves service, it builds codes of ethics and results in many other reforms."
>
> "Better results will come from voluntary acceptance, and such acceptance is inevitable, for progress will not be denied."

Direct-to-Consumer Selling: A Discussion

Remarkable Growth of House-to-House Canvassing in Last Few Years—Arguments for and Against It as a Distributing Method for Manufacturers—Has It Been Over-Extended?—Further Permanent Increase in Textile Field is Seriously to Be Doubted

By Louis R. Keeffe

No type of business has come in for more general condemnation within the last few years than that which sells merchandise direct to consumers through house-to-house canvassers. Thriving under bitter attacks, this method of distribution rolled up a new high record of sales last year and promises further growth in many fields. Is it going to revolutionize merchandising in this country? This article endeavors to present both sides of the question in an unbiased way, with the conclusion that direct-to-consumer selling has a place in the scheme of things, but a place which is limited by natural economic laws.

APPROXIMATELY $900,000,000 worth of merchandise of all kinds was sold direct to consumers by house-to-house canvassers, so-called "peddlars" and "bell ringers," in 1925. This is the estimate of Albert G. Burns, president of the Association of Direct-Selling Companies, Inc., which includes in its membership a number of textile concerns.

Mr. Burns is sales promotion manager of the Noe-Equl Textile Mills, Reading, Pa. These mills started business as the Noe-Equl Hosiery Mills on Nov. 16, 1922; for the year 1925 they did a volume of approximately $9,000,000, on silk hosiery and underwear sold direct to consumers in their own homes by the company's sales representatives.

The astonishing growth of this company runs hand in hand with amazing growth in the general field of direct-to-consumer selling. It may be considered a typical example of the progress that is being made in what is mistakenly called a new method of distribution.

A Fact, Not a Theory

Whether you like it or not, whether you consider direct-to-consumer selling an unmixed blessing or a downright curse, it is a fact and not a theory which must be faced. Approximately $900,000,000 in 1925, what will be the total value of goods sold direct in 1930?

Are we in the beginnings of a revolutionary change in distributing methods which will sweep all before it? Is the rapid growth in direct selling merely a temporary phase of the country's merchandising growth which will disappear entirely with the appearance of a little more normalcy? Is it merely a natural method of distribution with a place in the sun all its own and definite and limited possibilities for future expansion?

The purpose of this article is to discuss these questions in a general way.

Every dollar's worth of goods sold direct to the lady of the house in her own home means a dollar's worth of business that Mr. Retailer did not get. (Some say it means only about 80 to 90% worth of business which Mr. Retailer missed out on, but let's not argue about that now.) Naturally the retailers of the country, particularly the small town retailers, are up in arms against the "new menace." Naturally manufacturers and jobbers who form a part of the "recognized" merchandising system are casting more than scowls at the direct seller.

What Can be Done?

Just what can be done about it? The answer seems to be exactly nothing, along the lines of opposition which have been followed in the recent past. Direct selling, far from being a new method of distribution, is the oldest one on the face of the Earth. It traces its ancestry back to the beginnings of barter, which is something the retailer, the wholesaler and the factory system certainly cannot do.

It is perfectly legal. Attempts to curtail the activities of sales representatives of direct-selling companies through the enactment of local legislation in cities, towns and villages by means of a special tax or other hindrances have been held illegal and unconstitutional by the Supreme Court of the United States in an action brought by the Real Silk Hosiery Mills of Indianapolis.

No amount of verbal damnation will check the activities of the direct seller. He has felt his oats. He has formed an association of his own which at the present time has a membership of approximately 115 companies, all distributing merchandise direct to the consumer by their own sales people.

The Association

The officers of this association are: Albert G. Burns, of the Noe-Equl Textile Mills, Reading, Pa., president; Jacob Reichert, of the Nogart Clothing Co., Reading, Pa., vice-president; Harold L. Harrington, of the Firsching Knitting Mills, Utica, N. Y., secretary. Its directors include J. B. Lancaster, of the Edward Tailoring Co., Philadelphia, and Simon Friedberger, of the San-Knit-Ary Textile Mills, Inc., Philadelphia.

This association is only about a year old, and it has hardly had time to formulate a complete plan of action. Its main purpose in life is to protect the collective interests of direct sellers, and it may be relied upon to present an organized front to all attacks on the selling methods of its members. Individual companies in the association are vigorously prosecuting towns and cities which molest their salesmen or attempt to hamper them with special taxes, etc. Substantial damages have been collected from towns which have gone too far and thrown into jail the sales agents of certain direct-selling manufacturers.

Sane Argument Needed

The part of wisdom for those who feel that direct-to-consumer selling is fundamentally uneconomic seems to be to use a little more intelligence in their fighting. Restrictive legislation is definitely out of the question. Murderous invectives accomplish nothing. The general run of typical conversa-

tion on the subject is just so much wasted breath.

The way to make a case is to make it. Excellent work is being done by a comparatively few manufacturers along the line of a reasoned demonstration of the assumption that distributing merchandise through the regular channels of wholesalers and retailers brings that merchandise to the consumer at a cheaper price than does direct selling; that the place to buy goods is in retail stores where proper comparisons may be made, not in individual homes. Sensible reasoning on the whole subject, however, is chiefly conspicuous by its absence.

For the Defense

The case for direct selling runs something like this:

It is a demonstrated success in certain fields where "regular" methods of distribution perhaps fall short of the mark.

It brings its samples right into the customer's home, and allows her to select what she wants at her own leisure, doing away with many of the annoyances and inconveniences of modern shopping.

It develops, theoretically, a specialized sales service which is difficult to find in the average retail store. Its salemen are, or should be, specialists. When well trained they are experts on the merchandise they are handling, and can impart this expert knowledge to their customers. This is certainly not true of the average retail store clerk.

In theory, it eliminates one or more of the intermediary profits in the ordinary distributing system of manufacturer-jobber-retailer-consumer. It brings the manufacturer as close to the consumer as he can possibly get.

The Prosecution

The case against direct selling may be summarized in this way:

In certain fields, at least, it apparently increases rather than reduces prices to the consumer.

It increases the possibilities of misrepresentation of merchandise, of unscrupulous sales methods by unscrupulous concerns. Its most effective weapon is high-powered salesmanship, not always a good thing from the standpoint of the buyer.

It denies to the customer the advantages of the retail store, particularly that of side-by-side comparison of competing lines. It eliminates entirely from the merchandising picture the merchant's judgment in selecting goods for his particular community.

It is claimed to be unsound economically as a major method of distributing merchandise inasmuch as it is physically impossible to carry its expansion much farther. Bells are being rung too often even now for the housewife's comfort or peace of mind.

An Impartial Viewpoint

What is the answer? Time alone will tell. To the impartial observer it appears as if the real truth is located about midway between the extreme views of both sides of the argument.

Direct-to-consumer selling appears to have a real place in the merchandising system. To many it appears as if this place is being greatly over-extended, that the direct-seller is, in many lines, already overreaching himself, that in many cases he is riding for a fall. That its importance in textile merchandising will be materially increased, permanently, is seriously to be doubted.

But direct selling, as such, is an entirely legitimate method of distribution. Properly practised, it has a definite right to compete with any other distributing system. Unfair tactics against it will get no further than unfair tactics ever get, in the long run. Its boundaries will be set by natural economic law, no matter how slow that natural economic law seems to be in getting results.

Summing up, it may be conservatively stated that direct selling, a demonstrated success in specialty lines, is undoubtedly in for further mushroom growth because of general merchandising unsettledness; that this growth will probably recede like the waves of the outgoing tide within a comparatively short time, and the field be confined again to its natural limits—that of specialties.

The Noe-Equl Textile Mills—A Typical, Successful Example

SPECIFIC examples are always more interesting than generalities. For this reason a brief record of the development of the Noe-Equl Textile Mills, Reading, Pa., with the ideas behind their success, is being set down here. There are numerous examples of recent successes in the direct-selling field. This company is chosen as a typical one.

As has been stated, the Noe-Equl Textile Mills started business as the Noe-Equl Hosiery Mills on Nov. 16, 1922. Last year they did a business of approximately $9,000,000, entirely on merchandise sold to the consumer in her home by the company's sales representatives. They started with approximately 70 seamless hosiery machines; these were discontinued and today the company operates 40 full fashioned hosiery machines and 50 circular spring needle underwear machines.

4,700 Salespeople

The company has 157 district offices in all sections of the country; next year it expects to open up 90 new district offices. It employs at the present time approximately 4,700 sales representatives, both men and women, who work under the direction of district managers. These sales representatives work exclusively on a commission basis. Their commissions on sales average about 19%. District managers receive their compensation in the form of a percentage of the business done in their territories. There are no guarantees or salaries.

The customer pays the sales person at the time of purchase a deposit which is sufficient to cover his or her commission. Orders come in to the mill from the district offices and are delivered through the mail C. O. D. The company has a fully equipped Federal Post Office right in its mill, with Federal employes in attendance, to facilitate handling of the large amount of mail. It is declared that this feature often saves as much as three days' time in making deliveries to the Pacific Coast.

Hosiery Prices

The company manufactures all the goods it sells, and does not job anything. It guarantees satisfaction from all of the merchandise it sells. At the present time its line consists of four full fashioned silk hosiery numbers, all 42 gauge, and 9 underwear or lingerie numbers, all pure thread silk.

The hosiery is not sold in single pairs, but in boxes of three or four pairs. Present prices are as follows:

11 strand, 3 pairs	$6 75
8 strand, 4 pairs	6 75
5 strand chiffon, lisle top, 3 pairs	5 95
5 strand chiffon, all silk, 3 pairs	6 75

In the lingerie line, a vest is sold for $2.95, sport bloomers for $5.75.

"Field Only Scratched"

Albert G. Burns, sales promotion manager of the Noe-Equl Textile Mills, is what may be called a conservative enthusiast on direct selling. He believes that the field for this method of distribution has only been scratched, but on the other hand he believes it is rot to talk about direct selling supplanting other forms of distribution. It is *a* method of distributing merchandise, not *the* method, in his opinion.

In a recent interview with the writer Mr. Burns had the following to say:

"Direct to consumer selling by legitimate manufacturers is only in its infancy. Its field is being made for it largely by the growth in urban population, the lethargy of many retailers, the demands for better service on the part of the consumer.

"Go into an average retail store to buy a pair of hosiery. The girl behind the counter knows she has in stock a certain amount of hosiery, in such and such sizes, at such and such prices. Beyond that she knows nothing, and is not interested. Ask her something about the construction of a stocking and you draw a blank, if not an insult.

"Contrast this with the sales service given by legitimate manufacturers selling goods direct to the consumer. We insist upon thorough training for our sales people, from the raw silk to the finished stocking. Our people can answer intelligently any question asked by a prospective customer. They can volunteer helpful information. They are specialists in their field—salesman and saleswomen, not clerks.

"No More Fifth Avenue"

"Department store shopping in the larger cities," continued Mr. Burns, "is becoming more and more of a problem for the average woman. Proper service cannot be given to the crowds. I predict the day, not so far distant, when there will be no more Fifth Avenue in New York, no more State Street in Chicago, considering these streets as congested retail districts. Retail districts in large cities must be broken up and individual stores distributed over many sections of the city.

"When a woman buys a pair of chiffon hosiery in the general run of retail store she acquires not only ownership but full responsibility for wearing qualities. We guarantee every pair of our hosiery, chiffons included. This costs money, but it is part of our service.

Pianos and Automobiles

"I can tell you examples of direct selling results which will astonish you. In Boston a certain department store wanted to increase its summer sales of pianos, which averaged only about two or three a month. Last summer it engaged a force of well trained people to go from house to house on a 'sales survey,' and as a result sold 7½ carloads of pianos during one month.

"In Boston also a certain automobile dealer has made the Buick the car of largest sales in the city. Energetic house-to-house selling did it.

The Gentleman from Oshkosh

"And for retailers and others who curse us out," said Mr. Burns, "I have a little story.

"Some time ago I attended a conference on distributing methods held in Washington by the U. S. Chamber of Commerce. Secretary Hoover was present. What was intended to be a calm, dispassionate discussion of the various methods of distribution quickly degenerated into an exchange of recriminations. Everybody was 'balling out' somebody else as responsible for all the troubles in the merchandising calendar.

"Finally a gentleman from Oshkosh took the floor. (He was literally, not rhetorically, from Oshkosh.) He is a prominent retailer in that city, and he said in effect: 'If I lose business to anybody, direct-seller, mail order house, chain store or what not, I consider it is my own fault. Anybody who gets business away from me knows he's been in a fight.

Why Not?

"'My store gives service to its customers. We are alive and on our toes for every dollar's worth of business we can get. Our clerks know their merchandise; I insist on it. When a manufacturer's salesman who knows his business comes to town I hold him over an extra day, at my own expense, and have him tell everything he knows to the clerks in my department which handles his goods.

"'If you are losing business to the direct-seller or anybody else,' said the gentleman from Oshkosh, 'why not look to yourselves, not to him, for the reason.'"

Well, why not?

Florida Buys $15,000 Worth of Buttons

This Is But One of Many News "Beats" Picked up by Jack Card's Private Scout in the New Center of Textile Manufacturing

By Jack Card

WE are nothing if not timely. Whether it be Ford or the cross-word puzzle or Florida, we insist it be hot off the griddle.

And this *is* hot stuff.

Florida! What is more truly a 1925-1926 Model than that subject?

And furthermore this story isn't based on syndicated information. It comes to us direct from one of our private scouts who returned from the Land of Golden Dreams two short weeks ago—and who secured the accompanying photographs at risk of life, limb and dignity. Then, too, he came back without buying a square inch of Florida real estate. That shows what kind of a scout he is!

THE GREATER STORY STILL TO BE TOLD

"This, then, is the story of Textile City, of its inception and of the vision of the men which will make this huge industrial enterprise possible. This is the story of an industry which is putting added stamina and added punch in a state which is unlimited in its possibilities along these lines.

"But the greatest story of Textile City is being written for next week, and next month, and next year by the investors themselves.

"For when these plans, already started, have been carried to their successful completion, when the huge industry is going ahead full blast, when the workers are streaming out of the factories and hurrying home to their happy families, when homes and business properties are in great demand because of the intrinsic value in location which they represent—then will the greatest story of Textile City be written.

"Then, it will be, when early investors will see their property increase steadily in value—much faster than in most communities which have no BACKBONE to spur them on. Industry will be the BACKBONE at Textile City, and will be the determining factor in insuring a rapid raise in property values, not in a day, perhaps, but in weeks, and months, and years, as long as industry remains a BACKBONE for any community."—From "The Story of Textile City," published by the Textile City Corp., a subsidiary of the Florida Textile Products Co., Inc.

Construction Photograph of Initial Unit of Florida's Industrial Enterprise

The Line-Up

Well, anyway here's the dope:

Name of Company: Florida Textile Products Corp.

Location: Textile City, Fla.

Product: Tropical clothing, reed and wicker furniture, mattresses and bed springs, tents and awnings, automobile accessories, dress shirts and athletic underwear, workmen's clothing, work shirts, overalls, jumpers, etc.

Production Plans: "Orders already have been taken and plans are for some of the finished products to be on the market by Jan. 1, 1926," says an official November bulletin. (Accompanying pictures were taken Jan. 19, 1926.)

More Details

Keep your seats, ladies and gentlemen; we're only just started.

"These Things Have Been Done," states an even later bulletin. And the "things" include the signing of a $30,000 contract with a w. k. sewing machine company for necessary machines to be used in manufacture of workmen's clothing, etc. *And* the letting of a $15,000 contract for initial order of buttons.

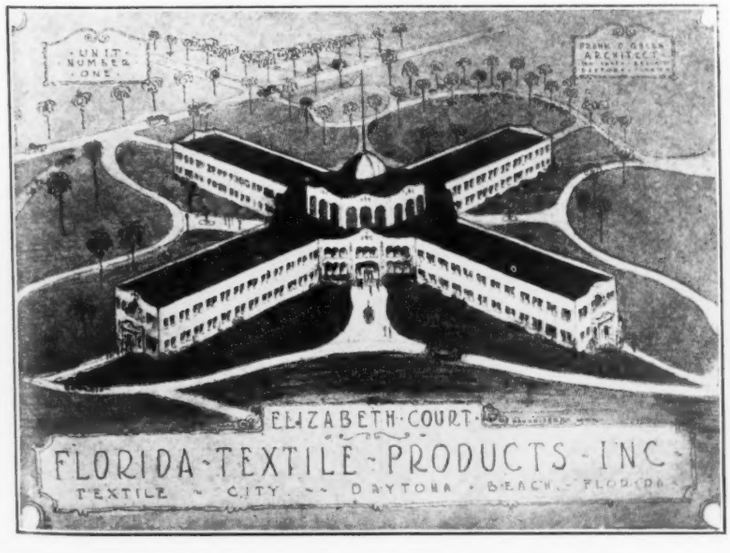
Those two facts, in themselves, are illuminating to us. Just think!—for every dollar's worth of sewing machines you have to buy 50c worth of buttons. *What* an intricate business! And $15,000 ought to buy an awful lot of buttons. We shudder to think how far they would reach, if placed end to end.

But, then, buttons haven't any ends, so what's the use of worrying about a silly thing like that?

Besides, there are other details to be recorded. To quote again from the official bulletin:

"Huge sign erected on Seminole

What Is a Mill Without a Sign? Here's One



A Vision of the Future (NOT Snapped by our Photographer)

Our Eagle-Eyed Readers Will Observe the Street Signs Emerging from the Swamps of Textile City

Trail which has been advertising development to thousands of motorists who pass by property each day."

That strikes home. Some years ago we orated at length on the foolhardiness of textile mills which go on operating day after day—without even a modest label to let passers-by know who, what and why they are.

And here's a development which starts with a sign and builds around it. Right after our own heart, say we.

Real Estate, Perforce

Oh, we almost forgot another incidental. We quote (as the platform speaker says): "Around this industry a city is being built. . . . Investors with faith in Florida, with vision and foresight in a development which is worthwhile, and an absolute necessity, can capitalize on that vision and foresight by purchasing Textile City property now, and then watch it enhance in value as the development unfolds at top speed. Lots can be purchased in Textile City as low as $875."

That's the trouble with this textile manufacturing game. You not only have to make cloth, but you have to build churches, schools, dormitories, Y. M. C. A.'s and even houses. Sometime it seems as if you almost have to go into the real estate business. Ask any southern mill man—he knows.

Textile Activity

Oh, to get back to those buttons for the nonce, as they say in good fiction. The representative of the firm which is to supply $15,000 worth of buttons to Florida is quoted in the *Daytona Beach Journal* as saying: "I travel all over the South in my capacity as sales representative, and I find textile factories operating to 100% capacity wherever I go."

Fortunately we discovered this item just before this Annual Issue went to press and we had our artist make last-minute changes on charts which we, in our ignorance, had plotted to show the textile industry operating at slightly under 100%.

By Way of Explanation

"No Head for Work Clothes," was the subhead in one of the many newspaper items reproduced in the bulletins previously mentioned.

That stumped us for a moment. It seemed possible to imagine work clothes quite destitute of a head.

But then we read further:

"Working clothes for men in many forms and varieties will occupy the last unit of the plant. A head for this department has not yet been announced."

So that's that.

"Springing Into Being"

There's nothing slow about this development. It's a regular "Leaping Lena"—whatever that may be.

'We quote,' once more:

"Around the industry to be located there, Textile City is springing into being."

And then again:

"A city—Textile City—is springing into being with a rapidity like the magic of a genii rubbing Aladdin's eery lamp."

And it's all quite true.

Our scout reports that a huge corps of two negroes was busily engaged in springing into being the rafters which may be plainly seen in the accompanying illustrations.

And that was only 19 days after New Year's day, when, as the bulletin tells us, "the first unit of this enterprise which is by far the largest of its kind in Florida, is to be completed, under the terms of the contract."

Ain't Florida wonderful?

Textile Workers of Tomorrow

Training Them for Their Jobs Today—Half a Million Boy Scouts and the Textile Industry

By M. R. Greene

AN interesting pamphlet on "Textiles" has recently been issued by the Boy Scouts of America. So many requests for this material have been received from scouts and scout leaders, that a special merit badge has been issued by the Boy Scouts of America for boys who wish to specialize in the subject. The pamphlet on textiles is to help them to win the merit badge in this subject. It has considerable value to those in the trade as well, and will be especially helpful to factory owners who wish to distribute educational material of this sort to their employes, to boys and girls in the community schools and to scout troops.

All About Cotton

The pamphlet is clearly written in language that a layman can understand. It does not attempt to treat the subject exhaustively, but rather to stimulate the boy's natural interest and define standard terms and processes so that he will want to do more work for himself. It contains a brief history of weaving and the textile industry, as well as a classification of textile fibres. O. H. Benson, of the Department of Agriculture, Washington, D. C., has written a valuable section on textile projects for scout troops. These are of especial interest. Under the cotton industry, for example, the development of the factory system and the importance of the industry at present, and its relation to human needs, are considered; raw materials, manufacturing processes, commercial product, distribution and the management of the mill are also covered.

Cotton Ethics for Scouts

Under this head, the pamphlet publishes the following paragraph:

"This may be developed to the working out and adoption of a Code of Ethics, which is a direct by-product and a correct understanding of the importance of the industry to the community, the nation and the world in its interdependence, first as referring to each part of an operation in a factory, and second, as to each individual in relation to the whole group constituting the mill force.

"If the work has been properly done the members of the troop will see more clearly their relations to one another, in the community, in the state and federal government. They also will see more clearly the opportunities for them in the cotton industry or the various business programs.

"No factory or business house can possibly succeed without having the several parts as a contribution to the successful whole. To produce a piece of cloth you must have inventors, tradesmen, mechanics, machine tenders, engineers, repairmen, and back of it all finances and brains with which to do the work. All this, however, may fail to produce results and profits unless we have acquired skill, management and the proper overhead direction and supervision."

Silk, artificial silk, woolen goods and worsted are also taken up in detail.

There are sections on adulteration of fabrics and a glossary and bibliography.

Requirements for Merit Badges

To obtain a merit badge in textiles, a scout must:

1. Identify a piece of woolen cloth. Identify a piece of worsted cloth. Identify a piece of cotton cloth. Identify a piece of silk cloth. Identify a piece of artificial silk cloth. Submit a collection of samples.

State how he would distinguish each of the above.

2. (a) Know the physical properties (appearance), in the raw state of wool, worsted, cotton, silk and artificial silk.

(b) Know how yarns made from these fibres differ in their character and state the means by which he would distinguish them.

3. Distinguish between a woven fabric and a knitted fabric, and state which wears the better and why.

4. State how wool, cotton and silk are grown, and name the principal sources of supply of each.

5. Outline the different operations that would be used in converting some fibre into cloth. Name the machines that would be used and the kind of cloth that would be made. Report whether data for this test are gathered from visits to a factory or from texts.

6. Produce a sample and tell what properties a good piece of cotton or woolen wearing apparel should possess.

7. State what size numbers of yarns signify. Illustrate with at least two samples.

8. State which fibres are easier to dye and which are harder, and explain why in each case.

9. Name the two principal sources of dyestuffs.

Not Just Fun

It may come as a surprise to some who think of the Boy Scouts of America as an entirely recreational movement, that takes boys camping in the out-of-doors, to learn that scouts are encouraged to work along technical lines as well. As a matter of fact, vocational training through its merit badge system is an important feature of Scouting. Over 70 pamphlets similar to that on Textiles are issued, so that a boy may become proficient in a good trade that appeals to him, such as plumbing, automobiling, carpentry, electricity or printing. About 150,000 badges for merit in these subjects were issued last year alone. The total number runs into the millions.

Scouts and Textiles

This is fine training of a practical sort. Since the demand for the merit badge in textiles was so great that the National Headquarters has issued this pamphlet, it is clear that there are many boys in textile centers who are also scouts. Indeed, some of the most successful troops are organized in industrial centers, and actually in connection with factories. The scout activities appeal to all boys, and to boys in congested sections of cities. Camp, hikes in the open, building a fire without matches and cooking dinner over a forked stick, those things all boys like, whether they go to school or go to work. Such healthy fun keeps them well, too, builds firm muscle and sends red blood dancing to their pale cheecks. It does them more good than mere gymnastic work or formal drill, because the boys enjoy it more.

Investing in Boys

As an investment in boyhood, this movement has proved a success. It is the idle boy who patronizes the pool parlor, and perhaps bootleggers, who gets to drifting with the wrong gang and ends up with petty larceny and a jail sentence. But keep him happily amused, with plenty of activities that he likes, and that train his character, and that same boy will grow into a thrifty and an industrious citizen, an asset to his employer, and the community where he works.

Get acquainted with this textile pamphlet, and get acquainted with what scout troops in your community are doing. Maybe you have a boy of your own who ought to join the scouts. If you haven't, you surely know one. And how about doing a good turn yourself, and helping some boy win that merit badge in textiles? Your help might mean a lot to him, and who knows, he may be the owner of a big mill, some day, or your police commissioner, or a future mayor. Write to National Headquarters, Boy Scouts of America, 200 Fifth Ave., New York City, for full particulars.

Some Fundamentals of Export Business

Domestic Industries in Export Countries Are Growing Constantly Stronger, Endangering the "Surplus" Theory—An Appreciation of the Ability of South American Merchants—They Are Alive to Modern Styling and Merchandising, and Properly Value Branded Goods

By Howard Swiggett

Manager, Export Department, Hunter Mfg. & Comm. Co.

Prophets who predicted that the United States would lose a large percentage of the increased cotton goods export business which came to it from necessity during the war have been fooled. Extremely capable management has made it possible for many mills not only to hold this business but to increase it in certain markets. The development work that has been done along export lines by a number of commission houses has been accomplished quietly and without publicity, and it consequently is not fully appreciated. The author of this interesting article is the head of a commission-house department which is known to have made an enviable record for itself during the post-war years.

THE importance of foreign business has been felt from the beginning of history when the Phoenecians ventured out in the Atlantic to look for the islands where tin was mined. Interference with their foreign trade, with those still all-important West Indian markets was one of the main causes of the Colonists fighting the Revolution.

Today when debt settlements and reparations depend almost entirely on an export surplus every nation, and indirectly every producer and taxpayer, looks abroad for some new market that is going to pay his debts or bring him prosperity.

Store of Elmudesi & Co., Santo Domingo

It is apparently widely believed that there are always export markets somewhere that can absorb every manufacturers' surplus production. Someone said some time or other that it would be a good thing if 10% of our national production could be sold abroad, until this figure has been generally adopted as a satisfactory goal without much consideration of what it means. Certainly not every one of our products can be exported to that degree and others must be exported much more heavily if their makers are to survive.

Local Competition

The general conception of a foreign market, however, is a place to move surplus. It is seldom suggested that an end may come to such markets. There seems to be a good deal more concern about European competition than about the local competition abroad which every day grows stronger, even in new countries, and which regularly, as it increases, wipes out the import into those countries of whole groups of products.

Brazil's production of heavy colored drills, Argentine's heavily protected rayon, and even now mercerized, hosiery business, Peru's extensive textile industry, are cases in point.

Many of such industries are crude but they are supported by an intense national feeling in most places and are protected by tariffs and internal laws which give them tremendous advantages. These are not advantages, however, that need be insuperable. But they are one of the many reasons why American manufacturers should not comfortably suppose that export markets ready to receive their surplus will always exist.

Dumping

The question of "dumping" is closely related to this same question. One definition of dumping calls it "price-discrimination between national markets." In the manufacturer's mind it is usually little more than the idea of "getting goods out of the country," while in the foreign mind it is a bogy of inferior goods being literally dumped into this country to be sold for what they will bring, their producer meanwhile holding up his own domestic price.

There is a good deal of anti-dumping legislation around the world. It probably serves to stop very little American export of cotton goods, largely because there is practically no attempt made to dump.

Of course any American manufacturer will smile at the idea of his being able to hold up a price at home while he gives goods away abroad. He wants and generally receives the same level of price abroad as he does at home. His insistence on this has been both proper and wise, because it has made his export business stand on its own feet in a way that such business as Germany had before the war, or any protected business, can never do.

Sound Markets Essential

As a result of this conservative attitude toward pricing it has been necessary to get the manufacturer sound business from established sources. Unfortunate experiences in 1920 have caused a good deal of loose criticism of South American merchants.

Manufacturers who have kept after business there since 1920, learning more of the people themselves, their problems, their own complaints about many of us, probably feel today much safer about these markets. They are not without their special hazards and never will be, but in large part they are made up of sound business men, differing only in language from the American manufacturer.

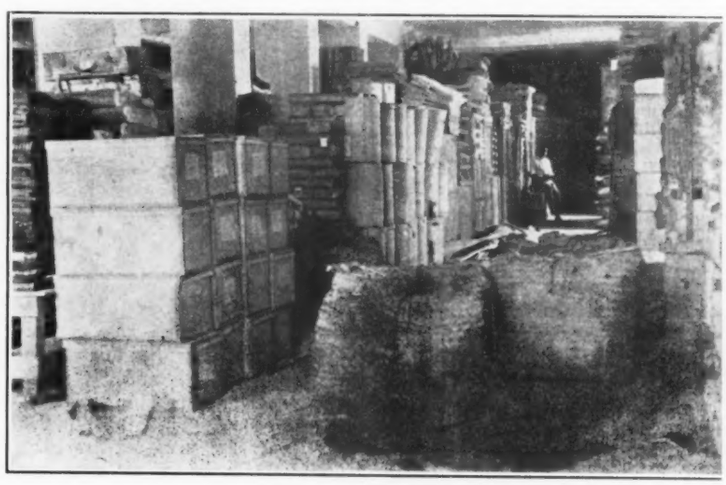
Two of our own accounts in South America started business under their present names in the eighteenth century. They have been "good pay" ever since. There is a cotton goods house in Dublin dating from the early eighteenth century which antedates these two and which seems to have been entirely above the storms that have swept Ireland since their founding. They happen to be the oldest accounts we know of but there are doubtless many others.

Representatives of the Hunter Company in the Mountain Region of Colombia

Live Houses in South America

South America, though, is full of new houses of the same standard as these older ones, houses managed by active and enthusiastic men keenly alive to the newest styling in fabrics and the best ideas in modern merchandising. It is hard to say how much the American manufacturer who is fortunate enough to be in touch with such firms, owes them. Particularly is this so at a time, when abroad no less than at home, styling has become so important.

It is people of this sort who can advise him when he goes to them with his new fabrics (for the surplus production of which he will soon need an outlet); they are the frank friends who warn him that there will not always be the same demand for the heavy, coarse yarn fabrics they have taken so largely in the past; they tell him that the new railroad they are building, the new harbor they are dredging are going to employ thousands of potential buyers of overalls and work shirts; from them he learns that the wages paid will be high and that the men will be buying their wives rayon and even pure silk



Interior of a Cotton Goods Wholesaler's Store in Santo Domingo

hosiery instead of the cotton they wore last year.

They are the sort of houses whose opinions will be worth something when he wants to know whether the spring floods have made credits in the interior unsafe or whether he can continue to ship. They are decidedly men whom the American manufacturer will find worth knowing.

Appreciation of Brands

There is one thing which should make them appeal particularly to the manufacturer. They understood branded merchandise. There are some kinds of business of which it is always said that it can be bought for a quarter of a cent. The South American merchant is a keen buyer. He likes to trade and wants the lowest price and the best terms he can get, but you can't buy his business for a quarter of a cent a yard and nothing else.

He wants the mark that is known and that he has had before. He realizes, in some ways more quickly than the domestic buyer, the economies possible in turnover of standard brands. His attitude makes it necessary for the manufacturer to watch brand registration with the greatest vigilance, but it gives him also the comfort of very loyal distributors.

Nothing is more difficult than to get the South American merchant away from standard mill brands that are merchandized with any reasonable restrictions. He doesn't want something everybody has, but he does want the mark that has made a name for quality. This gives a permanence to his relation with the manufacturer that is profitable to them both.

Some of the Risks

Export markets are always said to be more difficult than domestic ones. They are difficult and there are many reasons, aside from credit ones, why they should be. Most of them are subject to great natural hazards such as floods, earthquakes, and fires such as swept away Manizales last year. Such catastrophes are not only locally important, but they may impair communications for a long time through an entire country.

Of course many of these countries, are periodically threatened with revolution. Disasters, though, never seem to overcome them. One great reason is that they are inhabited by enterprising and thrifty people who have come out from Europe prepared for the worst and they are not going to be downed. The marvelous resilience of Cuba has been a by-word for fifty years.

Outside of these factors there is probably much less difference between risks abroad and at home than is supposed. It cannot be expected by well-informed manufacturers that their collections from countries where money is worth from twelve to eighteen percent, and exchange controlled, will be anticipated to the degree their domestic ones are, though even here the situation gets steadily better as the more prominent merchants, enjoying better prices for their own raw products, are able to build up credits abroad.

The Future

South American markets, however, will become more profitable for the manufacturer, be tied more permanently to him, as he ceases to think of them as foreign and puts into them the energy and the confidence he does into his domestic market. He must get away from the conception of export business as a back-log, "a place to move surplus," a dumping ground.

He is doing business there with keen, confident men, alive to all that is modern in merchandise and method, who are distributing to a thrifty population of great potential and actual purchasing power, with a standard of living that is rising yearly.

U. S. Export Trade Outlook for India and China

Increases in Business on Cotton Goods With Both Countries During 1925 Do Not Necessarily Mean Larger Totals in 1926—Indian Purchases from U. S. Confined Largely to Standard Drills—Large Increase in China Business in 1925 but Internal Conditions Not Encouraging to Expansion of Demand

By Vernon E. Carroll

STUDY of the latest export statistics relative to cotton goods shows that for the calendar year, 1925, comparatively few countries took a greater quantity of textile merchandise last year than during the same period in 1924. Among those that have shown an increase are the two large markets of India and China. The term "large" applies to the consumption of cotton fabrics in these markets, but has not meant much as far as America has been concerned for the last few years. To both of these outlets the amount of cotton fabrics shipped from the United States has been on a rapidly descending scale for a number of years up to 1925. For the year 1925 the shipments of cottons to British India from the United States have amounted to 3,267,132 sq. yds. as compared with 2,691,966 sq. yds. in 1924, or an increase of 575,166 sq. yds. In China the increase has been much greater. During the year of 1924 this country sent to China only 984,880 sq. yds. while for the same period in 1925 the amount was 6,530,072 sq. yds., or an increase of 5,545,192 sq. yds. This is by far the largest increase to any foreign market over 1924.

India's Trade in Drills

Almost all the business of bulk volume done by this country with India is on Pepperell standard drills. There has been little change in this situation for a number of years and it is a question whether other lines of domestic cotton goods will ever make much of an inroad into this market. Several years ago the operations of an export house gave promise of substantial business with this market on a varied line of merchandise. The goods were supposed to have been consigned and it is possible that the pioneer work which was then started might have been successful in introducing other brands into India, had it not been for the failure of the concern in question and the necessity of liquidating the goods in India at sacrifice prices. At one time as high as 20,000 bales of drills were sent to India but it is probable that during 1925 not more than two or three thousand bales were ordered. A few drills of other brands were shipped in earlier years, but there was no permanent demand for them. More recently a few voiles and other fancies have been sent to this market but the amount is negligible.

Competition from Japan

While the Indian market is one of the principal outlets for English manufactures, Great Britain has also suffered with America from the Japanese competition that has so broken into the trade with China and India. It is largely a matter of price that determines the purchase of goods for India as well as many other foreign countries. Japanese mills are able to under-bid practically every other nation on cheap cotton fabrics. Large shipments are now being made to India from China, believed to be of goods manufactured in the mills of the Shanghai district, owned or controlled by Japanese. The advantage possessed by such mills, in addition to the use of short staple cotton, is that many overhead charges, as well as labor and Chinese cotton as raw material, can be paid for in silver.

Evidently a great deal of weight is given to special brands which have established a reputation and for which there is considerable demand. This is illustrated by the popularity of the Pepperell drill which despite its higher price as compared with many other lines, continues to have a steady call from the native buyer. English goods are usually bought on the basis of marks long established in the Indian market by foreign houses, and many of them are ancient.

Is Indian Trade Possible?

The question has been raised many times as to whether it is possible to increase United States trade with India on lines of cotton goods. A good many experiments have been made and it has been hoped that some of our lighter drills may be established in market favor to meet Japanese competition. It is realized that the latter may not be as severe in the years to come, with labor in Japan demanding higher wages, but while Japan can operate through its Chinese mills at the low cost now possible there it seems likely that this competition will remain formidable. Suggestions as to changes in fabrics to meet the requirements of the Indian buyer have been made to American manufacturers, but for the most part they have involved changes in machinery or method of operation to which the American producer has not been willing to agree. As an illustration, endeavors have been made from time to time to persuade the American manufacturer to put colored headings in their fabrics in order to meet the peculiar requirements of the native buyer. This proposal has almost always been turned down, and the few goods made in this way have not been of sufficient stability or of the character to justify the belief that they will attain any sizeable proportions.

China's Prospect Problematical

At the present time China can hardly be said to exist as a trading country. It may be confidently assumed that practically as much cloth is being used in China as when the United States was shipping its highest total, but other sources are supplying it. Probably the principal reason why fewer foreign goods are imported into China, especially those of American origin, is the inability of the natives to pay for them. The debased currency of the mass of the population, and even more the oppression of the people during the constant political turmoil of recent years have reduced their buying power. They must have clothes and have to take the cheapest obtainable. They have resorted to the ancient source, the hand loom; perhaps to an increasing degree they have had to buy the Japanese goods and at present the product of the power mills operating in their own country. It is impossible to imagine the low level of living conditions throughout China and how near to starvation is the native population. The greatest frugality is obligatory and the employment of na-

tives is a matter of concern to an almost unlimited number.

Competition of Japan

In addition to the competition of hand-loom fabrics the activity of the Japanese has been and continues to be a very potent element in the decrease of imported cotton cloth into China. Japanese competition began in earnest in 1908, at first with Government aid, but soon was established on a permanent basis of economic and fair trade rivalry. Both England and America began to suffer from the low prices named on Japanese fabrics. For the China trade Japan uses India cotton at a very much lower price than the American staple. The cost of transporting raw cotton from Bombay to Osaka, which is the principal cotton mill district of the country, is not much more than the cost of transportation from the southern cotton field to the warehouse. In other words, it is a negligible factor and needs little consideration, except as a very substantial saving to the Japanese manufacturers. While Japan imports much American cotton, that staple is used in the production of cloth for their home trade under the protection of a high but intelligent tariff.

Details of China's Trade with U. S.

It is interesting to look back at the history of the cotton goods trade with China as far as this country is concerned. It was not until 1880 that we began to ship cotton fabrics to China in any quantity. About that time a number of mills were erected in the South, particularly designed to supply an export demand. It was found possible to produce coarse, heavy sheetings and drills at a figure which would compete successfully with England, which had previously enjoyed practically a monopoly in the China trade. There was no great objection or resistance on the part of England to this incursion of the United States. She was satisfied to allow us to develop the trade on coarse fabrics confining her activities to the finer qualities.

This trade continued to grow in volume and by 1904 had reached an average of about 300,000 packages per annum, approximating a volume of $15,000,000. In 1905 it received a tremendous impetus from the Russo-Japanese war and the demand for cloths from both armies. In that year over 700,000 packages were exported from this country to China. The unexpected peace cut off at once the abnormal demand, and the normal requirements of the Chinese markets could not absorb the great accumulation of goods at distributing points which resulted. It was not until 1908 that this accumulation was consumed. At this date the Japanese competition began to make itself felt and the trade in American goods has never been restored to its former volume. It has constantly dwindled until in 1923 and 1924 our shipments to China amounted to practically nothing. This constant curtailment was due not only to Japanese competition but in later years was largely the result of political disturbances.

Effect of Internal Troubles

The result of the political strife in China during recent years has been most destructive to internal trade. Chinese merchants are most courageous; they are compelled to be, both in investment and distribution if they do any business at all, but if it is certain that attempts to send their goods to interior markets will meet with the loss of the merchandise by confiscation, even they hesitate. There is for them no protection from a central government because there is no government. Every trading region is harried by contending military chieftains, self-appointed by force as governors of provinces, holding place only until the next stronger bandit appears, and squeezing the very life blood out of the unfortunate inhabitants meanwhile. Could it be expected that trade should survive such conditions? A few goods are transported, slipped in between raids, but there is no steady volume and the effect upon foreign goods is inevitable. Besides this, and as a commercial object of the bolshevik agitation in the Shanghai region came the temporary boycott of British and Japanese goods by which both England and Japan were affected in the volume of exports in China. It is a matter of conjecture whether orders sent to the United States at that time may not have been due in part to that influence.

Influence of Cotton Mill Strike

Another feature of the year's events in the cotton goods trade in China has been the cotton mill strike in Shanghai. Such a movement as a strike of any duration, as strikes are known in other countries, is impossible in China. The people live on the ragged edge of nothing at all times, have no reserve of money or possessions and must work to live. It was this condition among many other evidences that convinced observers that the so-called strike was financed from the outside. Operatives were paid to stop work and remained idle as long as the money lasted. When that was gone they went back to work.

Possibilities of the Future

Increases in the shipments for 1925 have been sufficient to lead many to the conclusion that something like the days of 1900 to 1905 is to be witnessed again in the relations of this country to China. Two factors are regarded as worthy of consideration in any prophecy of renewed China business. Shipments during 1926 depend largely upon Chinese political conditions. Unless there is decidedly more stabilization in China and the movement of goods internally is rendered safe, there is not much likelihood of increase in business and it is a question whether the total for 1925 can be maintained. The other factor is the matter of price. Tersely expressed by one long interested in China business "the way to get orders from China is to raise 20,000,000 bales of cotton in the United States. With raw material at 12 to 14 cents, we can name prices that would be of decided interest to the China buyer." The comparison of prices since 1914 shows a decided difference in the cost of the American fabric to the China buyer. Before the outbreak of the war, 3-yd., 48 x 48 sheetings sold to China at 7¼c. Of course the war made an entirely new basis of calculation from which the market has not recovered up to the present time. Today the quotation on 3-yd. sheetings is 12c., which is considerably lower than it has been, but is still not regarded as a figure at which free business with China can be consummated.

U. S. Lines Popular with China

Many of the old favorite marks which formerly went to China retain their popularity but certain lines of goods which used to be shipped largely to that country have been displaced largely by Japanese competition. The most striking illustration of this fact is the business in jeans. Formerly American jeans were taken in large quantity by the China trade, but today practically all the jeans used in China come from Japan. The same is true of some of the light sheetings, which are now supplied by Japanese manufacturers and by local mills. The principal lines that are sent to China today from the United States are sheetings—2.85 yd., 3 yd. 48 x 48, 3.50 yd. 64 x 68 and 4 yd. 56 x 60. Probably the biggest business is in 2.85 and 3 yd. sheetings. England has suffered along with America in a decline of China demand, except on white shirtings and sheetings with which we apparently are unable to compete. Very few bleached goods are sent to China by this country, the reason for which is not entirely understandable. Moreover, bleaching establishments both in Japan and China process the great bulk of imported fabrics. This provides an industry for the employment of labor and a certain amount of profit to the bleachers. There seems to be little demand for anything in the finished state, with the possible exception of a few colored drills to southern China markets, also a negligible factor.

Will China be a Big Market?

"China is going to come back some time." This is a generally expressed belief of all who have had trading relations with the country and who have made a personal study of conditions. Just how soon this development can be expected no one is willing to prophesy. Until a strong national government can be set up in China and the great latent possibilities of the country developed, there is little likelihood that the present chaotic conditions are to be bettered or the demands from the native population increased. The whole business fabric of the country has been torn to shreds and there is utter demoralization. Transportation facilities are reduced to a minimum and with the constant warring factions striving against each other for temporary superiority, with no motive higher than personal gain, it can well be imagined that the opportunity for orderly business is very slight. Present conditions can not go on forever or the country will be reduced to a level that beggars description. How the change is to be effected no one knows, but that it will come every one believes, and when it does come, America stands a very good chance of sharing in the development that must take place in this land of ancient prosperity.

South American Business Expands

Gain of Over 12 Million Yards of Cotton Goods as Compared With 1924—Criticism of Present Selling Methods

A BUSINESS of practically 112 million square yards of cotton piece goods is something worth considering by American manufacturers. It was this amount that was shipped to South America for the 11 months of 1925, largely to six countries—Argentina, Bolivia, Chile, Colombia, Peru and Venezuela. This total exceeds by over 12 million yards the aggregate for the same period in 1924. And yet those engaged in South American trade are not fully persuaded that this total is to be maintained for this year, even though they admit that the aggregate business with South America is not of the extent to which it should attain. The period of greatest activity in the last several years was at the end of 1924 and extending well into the succeeding year. Since August there has been a decided falling off in the demand for American goods, due to one cause or another. There have been changes in tariffs inimical to the growth of American business and competition from Italy and Japan has shown constant increase. Whether this competition is to develop to a greater extent or not it is hard to predict, but the fact remains that our business has been checked decidedly and only on those things which are not produced in other countries have we a free field.

S. A. Cotton Yarn Trade Important

The above totals do not take into consideration the amount of yarn sent to South America. This amounts to a very large aggregate, comparatively speaking, and yet the feeling is more or less general that, considering the possibilities, the growth of our export business in yarn has not been anything to boast of. The Argentine takes the most of a total which amounted to 12,037,257 lbs. for 11 months of 1925 as against 6,644,519 lbs. in 1924, or practically double. These figures are on carded yarn while on combed yarn the total for 1925 was 7,695,408 lbs. as compared with 5,100,560 lbs. in 1924. In other words, we sent to South America for the 11 months of last year a grand

total of 19,732,665 lbs. of cotton yarn. The bulk of this was of knitting yarn from which underwear and a certain amount of hosiery was made in Argentine and other South American mills. In addition a considerable quantity of duck yarn was exported, used in the manufacture of the canvas uppers of shoes with jute soles, used to a very large extent throughout Latin American countries. There are no spinning mills to speak of in South America and the weaving and knitting establishments have to import the yarn employed. Of course price is a determining factor in the fluctuations of demand, for with high prices the amount of yarn consumed declines materially, to go up again when a cheaper level prevails. It would seem, however, that with the increase of native establishments consuming cotton yarn the possibilities of further development in demand for American yarns are bright. A good deal of this business is being done direct and in this way it is possible to compete with other countries.

Business Unprofitable to Agents

The development of direct business to South America has probably been one of the most potent causes for its expansion. Nearly all the large commission houses and direct sellers in the American market have agents in various Latin American countries, some of them exclusive agents and others who divide their representation between various accounts. Certain of these agents are also agents for European lines, although this practice is not regarded as a satisfactory one to the American seller, as a greater percentage is allowed on English goods than on American and naturally the agent will devote most of his time and energy to those lines on which he is securing the greatest revenue.

Criticism of the methods of doing direct business is aimed at the apparent inability of the agent handling American lines to secure a satisfactory return for his efforts. This it is said is due to two causes. One is that the American producer is willing to take business from everybody whose credit is satisfactory no matter whether they are competitors in the same locality or not. This fact often causes cut-throat competition with the result that nobody makes a satisfactory profit. Business on English goods is conducted differently, according to report, and great discrimination is used about selling direct competitors in the same city or town. Another feature of American business is the pushing of specific brands or mill tickets, with the result that competition is produced on a particular cloth out of all proportion. Agents in this market who sell for various American houses have found it expedient in doing business with South America to put on their own tickets, in a sense camouflaging the fabric or at least not giving the buyer an idea of its origin. This is done in order to get away from the competition mentioned above, and has been found to be a successful method. One such agent declared that because of the careful put-up of samples which he sent out to South America with attractive tickets and care in the arrangement of the samples, he was able to get a better price for the same merchandise that was sent out direct and buyers assured him that the goods were better, although they were the identical fabric.

Low Grades from America

Limitations on the development of business with South America consist largely of competition by other countries. This is particularly true of Italian goods and applies also to the better grades supplied not only by Italy but by England as well. In fancy prints as well as woven goods we are able to compete only where our designs are more attractive. As in the case of South Africa we have made considerable headway in South America on blue printed drills. We seem to have made more development on this class of fabric than European manufacturers, but when it comes to printed sheetings both Japan and Italy apparently are able to beat us, especially in the border designs which are so freely furnished. Another disadvantage under which the American seller labors is that on Italian goods for instance, some of which are very handsome, as low as ten pieces of a pattern will be confined to a buyer, where on American goods if the demand is made for the confining of a pattern to a certain buyer it is stipulated he must take as least 200 pieces. This, of course, reacts to our disadvantage, with the smaller buyer particularly.

Comparative Details

Comparing the business of various South American countries in American piece goods, exclusive of yarn, Colombia takes the lead with practically 40 million yards in 1925 or a gain of 10 million yards over 1924. Chile comes next, with 21 million yards, a gain of a million for the year, while Argentina bought a total of 20 million as against practically 18 million yards in 1924. These are the three largest markets and in order Venezuela, Peru and Bolivia follow. The last three all show a decline in the 1925 business, especially in the case of Peru. Although not among the principal countries of export, Ecuador has taken considerably from this market but recent advance in duties and the necessity of extensive consul fee payments have reacted against the trade with this country. Late reports are to the effect, however, that these provisions may be abrogated. A good many cottonades and suitings formerly went to the West Coast of South America, but Italy has proven a formidable competitor on these goods with the resultant elimination of much of this trade. In Chile there is said to be more or less skepticism about certain credits at the moment which is a retarding factor.

Demand for Better Qualities

In the line of fancy goods the tendency in South America is apparently toward better quality of fabrics. Rayon mixtures and silks are increasing in favor with a tendency toward the better class fabrics which has incipient possibilities of development. It is another illustration of the point made above that outside of low grade staple fabrics the possibilities of development in South American business lie in the pushing of novelties which the native buyer cannot obtain from other countries. In all classes of merchandise it is the feeling that if the American manufacturer and his sales-agent are to secure the needed increase in export trade made necessary by the augmented production of American mills it will be possible only through a more intensive degree of attention to the details of this trade. At the present time practically no Americans represent domestic merchandise in Latin America. Agents in the various countries are not Americans; Germans and English predominate. The representatives of English mills receive a much smaller salary than a competent American would consider when the hardships and privations for an American going to South America are considered. The consequence is that the representation of American goods is in the hands of local agents who do not always give the service that ought to be rendered on American goods. In addition the percentage paid to the local agent is so much smaller for the most part than that which the English agent or representative obtains it is only natural preference should be given to goods from other countries.

Comparative Export Table

The table given below shows the exports of U. S. cotton goods to South America by countries and also by subdivisions of fabric for the years 1924 and 1925. It also shows the increase or decrease in the amount sent to the countries specified. It will be noted that only two countries, Peru and Venezuela, show a less amount imported for 1925 than during 1924, while the grand total for the year is decidedly larger.

UNITED STATES COTTON GOODS EXPORTS TO SOUTH AMERICA

SQ YDS.	Argentine	Chile	Colombia	Peru	Venezuela	Other So. Am.
Unbleached						
1924	4,838,475	15,281,664	10,143,865	1,617,957	2,842,123	10,378,903
1925	4,843,452	14,396,352	9,531,601	1,121,915	1,868,422	10,679,665
Bleached						
1924	2,425,091	1,312,011	1,545,213	303,611	.....	1,715,234
1925	2,618,999	2,088,252	3,262,676	456,399	.....	3,219,725
Printed						
1924	2,278,057	1,237,749	10,787,630	1,150,324	.....	7,149,621
1925	3,628,509	1,126,022	17,383,487	453,045	.....	7,807,713
iece Dyed						
1924	6,904,649	2,529,192	4,423,129	2,029,412	1,223,342	10,933,951
1925	5,706,800	2,613,823	7,251,209	1,504,069	1,513,416	9,922,096
Stock Dyed						
1924	3,652,034	2,003,352	5,011,866	1,628,986	3,582,618	4,300,205
1925	5,286,178	2,726,599	6,023,160	1,152,828	2,929,970	5,513,985
Total						
1924	20,098,306	22,363,968	31,911,703	6,730,290	7,648,083	34,477,914
1925	22,083,938	22,951,048	43,452,133	4,688,256	6,311,808	37,143,184
	+1,985,632	+587,080	+11,540,430	—1,042,034	—1,336,275	+2,665,270

Grand Total 1924 —122,230,264 sq. yds.; 1925—136,630,367 sq. yds. Increase for 1925—14,400,103 sq. yds.

Note: Under the heading "Other South America" are included the totals for Brazil, Ecuador and Bolivia, which imported the greatest quantity of this total.

KNIT GOODS CONFIDENCE

The textile business as a whole is in the strongest position which it has occupied in many years, as the jobbers during 1925 were able to work down their supplies to a very satisfactory point, and as a rule made money in doing so, leaving them in a very satisfactory frame of mind for 1926. Likewise the manufacturers of lines similar to that made by this company (cotton knitted underwear) while not perhaps showing any substantial profit for 1926 at least are going into 1926 with the belief that they have turned the corner toward prosperity enjoyed in previous years. There is a general feeling of confidence in the knit goods trade which augurs very well for this season.

KNIT GOODS MANUFACTURER.

Foreign Trade Balance for 1925 Goods

Possibilities for Increasing Exports Bright—Range of Textile Products Sent Abroad Widening—Honest Merchandise at Fair Prices and Intelligent Adherence to Recognized Commercial Practices Necessary—Expanding Trade Shows Growing Appreciation of These Needs

By E. T. Pickard

Head of Textile Division, Bureau of Foreign and Domestic Commerce

THERE were clouds in plenty upon the textile horizon of 1925, but from all accounts these clouds had a rayon lining. This remarkable product of the synthesist has indeed played the principal role in the textile drama of the past year and from all indications will continue to do so this season. That within a few years after its introduction the quantity of rayon consumed exceeds the number of pounds of real silk is remarkable enough, but more interesting still is the fact that rayon, when combined with other fibers, has stimulated and broadened the use of most other textile staples. The last statement is peculiarly applicable to real-silk mills which, notwithstanding what might be regarded as the strenuous competition of rayon, were very active, and consumed approximately 134,000 bales more of the natural fiber in 1925 than during the year before. Cotton, woolen, and worsted cloths, and also knit goods of all descriptions have been enhanced both in attractiveness and value by the addition of rayon.

Another very commendable and conspicuous development during the past year has been the growing appreciation on the part of our manufacturing and merchandising community of the importance of styling and adapting production to vogue tendencies. Changes in merchandising practices are also being given more serious consideration with a conscientious effort to meet reasonable demands for reforms in this direction.

Government Relation to Industry

The firm, steady policy in governmental circles for less interference with legitimate business and encouragement thus lent to the latter to solve their own problems is another noteworthy trend. Public opinion is beginning to appreciate this newer conception of governmental relationship to industry and the encouragement to business to administer its own affairs without Government subsidy or obnoxious regulation has induced an atmosphere of confidence which has had no little effect in the recent progress of our industrial and merchandising groups.

True there have been the usual setbacks and disappointments in some branches, but these difficulties somehow or other will be solved. Things have a way, not altogether self constituted, but aided also by the serious application of our industrialists to the problems, of balancing or adjusting themselves. For example, while in 1886 it took 22 yards of cotton cloth to make a costume it now requires three, but the increased use of cloth for industrial and mechanical purposes and the greater number of dresses demanded by women make up the difference. We may use less white goods in the form of sheets and other articles in the home, but secret organizations rise up to shroud themselves in these materials. The sailing vessel has all but disappeared, but we are using ducks in our automobiles instead. As I pointed out, such matters usually find their own solution or are corrected by the efforts of those concerned. Although some may think that the example recently set by one of the European governments in regulating the height of women's dresses to no more than a foot from the ground under penalty of a heavy fine for the first offense and imprisonment for the second would be a good law for us to copy for the benefit of the American textile industry, I venture to suggest that such governmental inhibitions in the United States are far from possible.

1926 Outlook Favorable

The outlook for 1926 is much more favorable than might have been said of 1925. Prices of most raw materials essential to the textile industry are more stable than in many years and are at levels more likely to induce consumer purchase of manufactured materials.

WHAT THE WELL-DRESSED TEXTILE DIVISION CLERK WILL WEAR

International News Reel

Edward T. Pickard, Chief of the Textile Division Department of Commerce is shown inspecting native grabs collected from all over the world so that American manufacturers may be kept informed as to what's what in the changing foreign style markets where American clothing material is sold. Miss Eva Morgan and Miss Orella Pittard, department clerks, are shown modeling the strange garbs.

Our exports of manufactured cotton goods show a healthy increase of some 15 per cent over the year before, totaling about 543 million square yards. Exports of knit goods in the various classes were also satisfactory. Cotton underwear shipments increased, silk underwear doubled, cotton hosiery went ahead 15 per cent, and rayon and silk hosiery almost doubled, reaching some 34,000,000 pairs. Even cotton gloves made remarkable strides, trebling the 1924 figures and amounting to about 1,625,000 pairs.

Our imports of cotton goods fell off considerably from 177 million square yards in 1924 to 110 million square yards in 1925. Of this decrease unbleached goods imported declined nearly forty million square yards, while colored, printed, and fancy goods declined 50 per cent to twenty-nine million square yards. If we consider the increase in our exports and decrease in our imports of cotton cloths there is a net improvement over the year before in this item of our foreign commerce of something like 127 million square yards.

Possibility of Expansion

The interesting feature of our exports of cotton cloths and various kinds of knit goods is that they go in varying quantities to 100 different countries of the world. That this trade can be increased still further is without dispute. The market in Europe for our knit goods continues in the main to grow notwithstanding certain new developments which are making competition more difficult.

The British and Australian Governments, for example, have been agitating for tariff adjustments on imports of knit goods. In Great Britain the basis of these proposals is the safeguarding of local industries under the assumption that goods manufactured abroad under sweat-shop labor conditions are being dumped. That this allegation is baseless so far as we are concerned is well known to every American manufacturer and merchant. In fact, we export to Great Britain but 1⅓% of our total production, while we in turn take approximately 3¼% of the British knit-goods output.

High-power salesmanship does not count abroad. Honest merchandise at fair prices and intelligent adherence to recognized commercial practices do. That we are gaining cognizance of these facts is evidenced in the ever widening range of textile products exported and the expanding circle of countries to which our goods are destined.

How Long Will Fancy Half Hose Be Good?

The Crest of Big Popular Demand Will Probably Come This Spring—Gradual Decline Predicted, Except for Wool Goods—Current Style Swing Should Leave Behind It a Larger Normal Market for Men's Novelties—Clocks Coming Back Strong?

By Louis R. Keeffe

Heated controversy continues to rage over the problem of how long men's fancy half hose will be good. All varieties and shades of opinion on this subject are to be found among men who should know the hosiery business inside out. Extremely capable students of market trends have gone wrong more than once thus far on the extent of the vogue for novelties, which leads to the natural conclusion that they may go wrong again. The writer of this article takes the position that this spring will witness the crest of the big popular demand, but it will be noticed that he carefully hedges on this position.

NO SUBJECT before the hosiery industry is more loaded with dynamite than that which has to do with the life of the vogue for novelty half hose. Whichever way the prophet jumps he will be not only without honor in his own country—he will be at the wrong end of sturdily hurled brickbats.

With which acknowledgment we shall blandly proceed to put our foot in it by declaring in a loud voice that the crest of the wave of popularity for men's fancy hosiery will probably be seen this spring. With the passing of the spring season the big novelty vogue will start downhill, in our opinion, on all classes of merchandise except wool goods.

It should be further stated, however — also in our opinion — that men's fancies will not go out with the bang that has characterized the end of similar style movement in the hosiery business in past years. From all present indications the process of a return to staples will be an orderly one.

And the tide will not go out entirely. It seems firmly established that when the big vogue for fancies does go the way of all novelty vogues it will leave behind it a considerably larger regular market for novelty half hose than has ever before been seen in this country.

It is the purpose of this short article to discuss the main angles in the proposition, and to marshall the arguments in favor of the position we have so recklessly taken.

Of Prime Importance

The subject of how long men's novelties will be good is perhaps the most important before the hosiery industry at this time. The dollars and cents investment in new machines and new attachments to make the striped and checked half hose which have been so popular may not be as heavy as the investment in new full fashioned machines which has been and is being built up. There are more mills involved in the half hose proposition, however; more individual interests are at stake.

Every mill and every selling agent worthy of his salt has taken some kind of a position in the matter. Many of these positions are none too secure. Most men are open to argument on the attitude they have adopted. Everyone in the business knows that numerous men of ability have been fooled by the endurance of the novelty vogue to date.

A Short History

It is interesting to think back on the number of times that usually clearsighted individuals in both the manufacturing and the selling end of the business have been wrong on this fancy half hose style swing.

Even during the most staple of staple years there is always a market for fancies, of course, but this is taken care of by a comparatively few mills which specialize in novelty patterns. The early summer of 1924 witnessed the start of the present movement, so far as general interest is concerned. It was about that time that special attachments for making the variety of stripes and checks which quickly became such big sellers were offered in a general way by machinery manufacturers.

A comparatively few manufacturers saw the handwriting on the wall, took a chance and jumped into what they believed would be a good thing. From the very beginning there were pessimists. Old ideas are hard to kill, and the idea that "nobody ever made money on novelties" is firmly imbedded in many of the conservatives. It does no good to argue that a number of mills make money on them right along in staple years as well as in novelty years; that the early birds in the big movement which now appears to be at its height have made much better than respectable financial showings.

There are those who continue to insist today that there is nothing to the novelty half hose vogue, notwithstanding the fact that novelties took a percentage of the total half hose business in 1925 which is variously estimated at from 25 to 50%.

Gradual Decline Predicted

For over a year and a half now novelty half hose, generally speaking, have been active and staples, in an equally broad sense, have been dull. Why should this condition not continue for another year or two?

Asking and answering our own question, this condition will undoubtedly continue, in a measure, for another year or two. The whole point we are trying to make is that while the crest of the wave probably will be seen this spring, men's novelties will decline slowly in popular favor. It is logical to expect that their decline will be spread over a year, possibly over two years.

Why pick out this spring as the apex of the movement?

A satisfactory answer to this question is naturally largely theoretical. The premises are entirely a matter of opinion. For example, with the end of the spring season this year men's novelties will have had two years of large popularity. Past experience has proved that a style swing of this kind normally has an allotted span of life of two or three years. With the passing of two years it is wise for manufacturers to begin to be cautious, even in a novelty era as broad as the present one, and even if there are no storm signals hoisted.

Clocks Coming Back?

It would be inaccurate to call some of the influences now at work storm signals. Yet there are signs abroad, all of them vague and indefinite, which make caution extremely advisable.

Fancies have long since passed through the exclusive stage. Patterns to retail at 25c will be on the market this spring in considerable numbers. The rank and file of sporty dressers have taken vivid patterns to their ankles, which means that the so-called style makers and leaders are inclined to give them the cold shoulder.

When an apparel style is taken up wholeheartedly by the "masses" it is quickly dropped by the uppercrust. The men about town then go about the business of going in for something different which, in its turn, may or may not be taken up by the man in the street. The cycles are unending.

According to a few qualified observers fancy patterns in men's socks will be succeeded by a big return to clocks, but it is still a little too soon to decide just how much there is in this theory.

Certainly it is logical to assume that the natural course of events will be an increase in favor of more conservative fancies, both in pattern and color, and a declining volume on extreme styles which have gone over well during the last year. From conservative checks to clocks, in turn, seems a logical step.

In other words, the prediction that men's fancies will reach their peak during the coming spring season is based primarily upon the very fact of their recent and present large popularity. Although the great mass of conservative dressers have consistently stayed away from them they have been taken up with enthusiasm by the younger generation.

And the younger generation these days is not noted for sticking to any style in apparel for any length of time. Its appetite quickly becomes jaded — for hosiery as well as for other things. It is, indeed, mildly surprising that the sporty youth of the country has stuck to fancy patterns for so long.

Hosiery men whose ideas are usually worth listening to say that the type of male consumer which has made possible the big business on novelty half hose is becoming fed up with fancies and will gradually turn their favor to more staple hosiery after the spring of this year.

Secure Future for Wool Fancies

Before closing the discussion mention must be made of the fact that there is a distinction to be drawn in fancy wool half hose for fall and merchandise designed for spring wear. It is the belief of excellent merchandisers that novelty wool half hose will be good for many years, even if the spring business, after this year, returns to a staple basis.

The influence of the attractive imported patterns in wool half hose has been tremendous, and it apparently insures a good market for men's wool fancies for years to come.

Playing It Safe

Poor judgment in the past on the extent of the vogue for fancy socks as a whole has been largely due to failure to appreciate the novelty trend in all classes of apparel. Many have failed to take into account the influence of what may be called the jazz age on the youngsters of the country. The big vogue for low shoes has been of primary importance in the building of a large market for fancy hose.

In other words, the more you talk about this subject the more apt you are to find yourself presenting a beautiful argument for further expansion of the business on men's novelties. Inasmuch as we have taken a position on the other side of the fence we intend to choke this article off right here.

And further to hedge on our position we shall close the present discussion by saying that if you have ideas opposed to those expressed here you have, in our opinion, about a 49% chance of being right.

Heritage a Handicap to Garment Industry

Recurring Contest Between Small and Large Shops—Review of Current Situation and a Little History—Individualism and Inability to Delegate Duties Typical of Merchants—Very Small Shops Lessen but No Movement Toward Large Scale Production—Cooperation with Mill and Retailer

By William B. Dall

IT has been said that the cult of the basement shop has never quite been shaken off by the women's clothing industry. Despite the fact that the 1921 census placed this country's women's garment production at $401,306,000, and that individual shops have moved from the basements into pretentious loft buildings, the industry as a whole retains many of the peculiarities it had in its earliest days, and suffers from the same problems which have been recurring periodically since the Civil War.

Large Scale Production Absent

Its most marked distinction from other industries of similar magnitude is the failure of any trend toward large scale production in individual shops. There are, of course, always certain outstanding manufacturers in the field, but they are not great industrialists who build up great economical production by merger and combination, but rather great merchants and stylists who let out the greater part of their work to many small independent shops, becoming great through their market judgment and bargaining ability rather than their manufacturing technique. The fact is that, quite in opposition to the modern trend toward merger and combination, the garment industry in recent years has been breaking up into numerically greater but individually smaller units. There are more shops and fewer workers than there were ten years ago, but this trend now appears to be checked and the present swing is gradually in the other direction.

Let it be noted at the start that our comments are made from the viewpoint and based on the general statistics of that part of the garment industry which is in New York City. Since the New York City production is a shade more than three-quarters of the production of the entire country, the facts in this case may be considered as dominant ones. For 1919 the census showed a national total of $519,509,000 of which New York produced $393,743,000, and for 1921 the total was $401,306,000 with New York's portion $316,417,000, which figure out as 75.8% and 78.8% respectively as New York's share. Of the remainder, on the basis of the 1919 census, Ohio produced 6.4%; Illinois, 5.9%; Pennsylvania, 5.7% and all other States, 6.9%.

The cloak and suit industry operates under different conditions from the dress and waist industry and it is only the former which is under consideration in these columns.

Less Workers Per Shop

The report of an investigation directed by the Governor's Advisory Commission into the cloak, suit and skirt industry of New York, to which report the writer is indebted for most of the statistics presented herewith, concludes that the average number of workers per shop in New York declined from 29 in 1914 to less than 17 in 1924. These figures are derived from estimates that the number of shops had increased from 1,750 in 1914 to more than 2,100 in 1924 while the number of workers had decreased in the same period from almost 50,000 to about 36,000.

The multiplication of small shops makes the enforcement of uniform labor conditions difficult, this report points out. The ability of the smallest ones to exist depends on the difference they can retain between the price they get and the wages they pay. As these small shops are probably doing work for somebody else on contract, they own no goods, probably rent their machines, and wages comprise their chief expense and the only one open to manipulation.

Many of these small shops are of mushroom growth and of no fixed responsibility. The twelfth annual report of the Joint Board of Sanitary Control in referring to them says, "No sooner does the owner of the shop receive orders to improve conditions than the slack season begins and the shop disappears as quickly as it had appeared in the early part of the season."

The turnover among garment shops in New York is estimated at about 38%; that is, more than one-third of the shops in the business go out of business every year. That they are replaced by others is evidenced by the figures which show an increasing number of shops since 1912 with only few breaks. As authorities point out, a "shop" may be set up in an hour by moving a few sewing machines into a rented room. Potential competition of this sort is an element always to be considered in this industry.

A Few Definitions

The history of the industry records a continuous battle between the "inside" and "outside" methods of production, between big and little shops. In case the trade's present day terminology may not be quite clear, let us make a few definitions:

The inside shop, or manufacturer—This is the relationship common in other industries where the owner of a shop has garments made by his own employes from materials bought by him, and these garments also are sold by him or by his employes.

The jobber, or wholesale stockhouse—This factor sells garments, the design of which he creates, to the same class of trade as does the manufacturer and he also buys piece goods, but he does no manufacturing. He turns that duty over to the submanufacturer.

The submanufacturer—He owns and operates a shop which cuts and makes up garments from goods supplied by the jobber according to designs also supplied by the jobber.

The bundle-contractor—This is a small producing unit which makes up material supplied by another concern, usually a manufacturer. The goods are supplied to the contractor already cut. The contractor is often closely allied to the inside shop, which is his principal customer.

These classes are not always distinct and there are inside shop manufacturers who employ submanufacturers for part of their product while they employ contractors at the same time. Some submanufacturers in turn may sell part of their product to retailers.

Goes Back to Civil War

During the early part of the growth of the industry in New York after the Civil War the units consisted of fairly large inside shops. Soon after 1880, however, with increasing immigration, small shops sprang up, chiefly in tenement houses, and the manufacturers found that it was a saving to send their cut goods to these shops to be made up. By 1890 it is said that bundle-contracting in these outside shops accounted for the major part of the industry's product. This was the "sweat shop" system which remained so long a matter of public scandal.

The next phase of growth was the evolution of many of the bundle contractors into small independent inside manufacturers. The U. S. Industrial Commission credited contractors with 90% of the industry's production in 1890, but with only 25% in 1900. Between 1900 and 1905 when the industry was moving from the vicinity of Canal Street to the area around the foot of Fifth Avenue, the trend toward larger units of production returned only to fall as at the earlier period into more and more dependence on the smaller outside contract shops.

After the strike of 1910 had resulted in the so-called "Protocol," the restrictions placed on the inside manufacturers' shops were such as to tend to draw business from them to the less strictly controlled contractors. As owners of inside shops turned jobbers, contractors were employed on a more extensive plan than formerly, becoming in effect what has been defined above as submanufacturers. The union is said to have coined the name in order to bring them under the regulations which governed the inside manufacturers, while at first the old inside manufacturers insisted that their affiliations were still with contractors.

The Present Scheme of Things

The decline of the inside shop and the contractor and the growth of the jobber-submanufacturer system has been typical of the most recent period. Figures on association membership as given in the report of the Governor's Advisory Commission tell the story. The association of inside manufacturers, the Cloak, Suit and Skirt Manufacturers' Protective Association, declined from a high point of 405 members in 1916 to 198 members in 1924. Of the 463 withdrawals reported from the association since 1917, 252 withdrew to become jobbers. The average number of workers in the shops of the association in 1924 was 40 which is more than twice that noted as the average for the industry as a whole, indicating that inside shops tend toward larger operating units.

The association of jobbers, the Merchants Ladies' Garment Association was formed in 1917 with 27 members. In 1922 there were 125 members and in 1924 there were 106 members. The association of submanufacturers, the American Cloak and Suit Manufacturers' Association, was formed in 1919 with 625 shops represented. This rose to 873 the next year and has since declined to 630 in 1924. The turnover in this association is very large as in the two years from July 1, 1922 to July 30, 1924, 464 new members were received and 631 members resigned or dropped. It is regarded as probable, however, that the jobber-submanufacturer system accounts at present for 75% of the industry's output so far as New York is concerned.

Evidence of Labor Surplus

The report of the Governor's Advisory Commission points out that the membership of the various local unions which cover the various classes of operatives employed is considerably in excess of the number of workers actually employed. The membership of these locals in July, 1924, is placed at 42,973 as compared with the 1924 employment figure as previously mentioned, of 36,000. The disparity is even greater when it is considered that an estimated number of 457 non-union shops in the fall of 1924 employed about 3,100 which would leave 32,900 as the number of union workers employed at that time. The evident surplus of labor is one of the factors which presents the "constant temptation to the establishment of new shops and non-union shops."

Among the submanufacturers there

is usually the keenest sort of competition for the work supplied by the jobbers, and many submanufacturers fall by the wayside each year only to be replaced by others. There are no limitations on the number of submanufacturers which a jobber may employ nor the amount of work which may be given to each. The effort has been made to supplant the old competitive system with a uniform price list for the various operations on different classes of goods so that the playing of one submanufacturer against another might be eliminated. In the course of a season a jobber may employ almost any number of submanufacturers. Few employ less than ten, many run up to 50, some exceed 100 and at least in one instance in recent seasons a jobber has employed a little over 200 submanufacturers, though more than three-quarters of each jobber's work in usually done by comparatively few, say five to fourteen submanufacturers.

Submanufacturers in turn work for a number of jobbers, most ranging from five to twenty with few going above and below this approximate range. Here again 80% of the work is done for from one to three jobbers. Not more than 25% of the submanufacturers have any dealings of consequence with any but jobbers, but a small proportion of them do sell garments direct to the retail trade.

Future Possibilities

It is a conceivable development of the future, particularly in view of the development of the uniform price list for submanufacturing, that large retailers might take into their own organization the functions now performed by the jobber. It is probable also that the year 1924 saw the peak of the most recent cycle in the growth of small shops and that the trend is now away from the very small units.

Seasonable Nature of Work

The seasonal nature of the work in the garment trade is an important factor in considering the possibilities for increasing efficiency. The spring peak of activity is reached usually in March, the maximum summer inactivity in June, the fall peak of activity (which is usually less intense than the spring peak and shorter in duration) in October, and the maximum winter inactivity in December. From July, 1923 to June, 1924, according to the report of the Governor's Advisory Commission, workers in inside shops were employed for the equivalent of 40 full time weeks, while workers in shops of submanufacturers were employed for the equivalent of 31½ such weeks, being 77% operation in the former case and 60½% in the latter.

Backing up the trend away from the smaller shops is the accepted practice of the union in recognizing as union shops only those with 14 or more sewing machines, and the union's contracts with the jobbers to let out work only to union shops. The development of unemployment insurance may go a long way toward solving one phase in the difficulty of the seasonal nature of production. The plan is for a contribution by employers of 2% of their weekly payroll toward the unemployment insurance fund and a contribution by the workers of 1% of their weekly wages.

The Trail of the Garment District

The cloak and suit industry in New York has always centered in a certain district which has shown the same uptown movement as found in many other business centers of the metropolis. In the 90's the industry centered around Canal Street. Not long after the turn of the century there was a movement up to the region just south of the foot of Fifth avenue. Then came the move to Union Square, then in 1910 to 1911 to the area between 23d and 34th streets on Madison and Fifth avenues, and finally in the years since 1921, to the new district on Seventh and Eighth avenues between 34th and 40th streets.

The most recent move of the industry is probably the only move taken cooperatively and with a plan clearly thought out in advance. It was started by the activity of a few farsighted men who formed the Garment Center Capitol Realty Co., composed of 15 officers and directors and 17 additional stockholders, who backed the investment of about $20,000,000 for the erection of the two large loft buildings which now stand on the north and south corners of 37th street, on the west side of Seventh avenue, known as the Garment Center Capitol. The ideals behind the project were high and it was carried through with a dignity which not only lent success to its immediate purpose but to its further aim, the transplanting of the entire industry into a new section centering around these first great structures.

The men who carried through this project were all from the garment industry. Their leaders were Saul Singer of Singer Bros., who was president of the realty company; Mack Kanner of Mack Kanner & Milius, vice-president; Julius Blauner, treasurer, and Jacob Reich, chairman of the Service Committee. Mr. Singer is now a vice-president of the Bank of United States, and Mr. Kanner is head of a realty company which is engaged in further loft building developments in this same section of the city. Mr. Kanner was in direct charge of the building of the "Capitol." Plans were announced late in 1919, work began in May, 1920, and first tenants moved in during June, 1921.

Reasons for New District

The garment industry with its tremendous morning, noontime and evening outpouring of crowds onto the streets, has been held accountable by some for snuffing out the old retail district in New York between 14th and 23rd streets. The new center of the department store area, 34th street and Fifth avenue as it was in 1918, was considered in jeopardy again from the same cause. Various city planning organizations were interested in preserving Fifth avenue against the introduction of manufacturing enterprises and the high rentals in the old Fifth to Madison avenue garment center roused the garment men to equal interest in finding a new location.

The new buildings in the new district have the advantage of being built with the garment industry's needs particularly in mind. Suitable elevators, package chutes, express facilities, and light and power are provided, together with as low an insurance rate as is practical. The whole Seventh avenue district affords a central buying market for the industry's customers and a central manufacturing district in an area which, prior to 1921, was lying fallow and which is now open to considerable extension to the west. Extensive loft building has gone on in this district during the last four years and is still in progress.

The Garment Center Capitol

The Garment Center Capitol buildings themselves are a monument to a great effort to bring about team work and cooperation in the place of cut throat competition. Tenancy there brings rights to membership in a club with large dining room, spacious lounge and well equipped gymnasium on the two top floors of the South Building. A high business code was also urged upon tenants so that tenancy in these buildings would stand for a reputation which would be a definite asset in the minds of the industry's customers. In brief the code is that merit be made the basis of competition without any other consideration. Saul Singer is generally credited with the creation of the vision which finally materialized in the new buildings for the garment trade. He is a native of Sebastopol, was president of the manufacturers association in 1918-19, and did much to effect cooperation between organized workmen and the manufacturers. He was at one time chairman of the State Labor Board.

Despite what James Wallen calls "the long and painful journey of the garment industry from the little basement shop to the great loft buildings of the new garment center in New York," the lesson of efficiency never seems to have been learned by the industry. Men who have looked upon the trade from inside as well as from outside, are struck with the tremendous waste and they are prone to regard the prices of finished garments of the better sorts as out of all proportion to a reasonable value of materials and the actual labor necessary to their production. Small purchases by retailers, small package shipments, cancellations and returns are a few of the hindrances on the distribution end. Garments returned by retailers often reach amounts of great magnitude and are quite as much a problem to the garment house as are the returns and cancellations of piece goods by the garment house, to the mill man. Some New York stores are said to buy their garment requirements on a daily basis, the buyers for large and prominent retailers actually going out of the salesrooms with their selections over their arms.

There are many expensive accessories to garment production, one in particular being the elaborate show room maintained by the most important firms. The carrying on of manufacturing immediately adjacent to the showroom, as seems to be the custom, saddles the manufacturing end of the business with a higher rental than might be, were the manufacturing carried on in less pretentious surroundings.

Hope for greater efficiencies at present in manufacturing seem to have little foundation. The business is often one of temperament and the artistic side of the productions, particularly in the better grades, cannot be overlooked. The average garment manufacturer is mentally incapable of delegating authority. He is most successful when he does almost everything himself, which is one of the reasons for the absence of any large shops in the industry. It is said that once two brothers decided to divide the work of their garment business between them; one was to sell and the other was to manufacture. The arrangement did not last six months for each was continually dabbling in the other's sphere.

Change in Style Impulse

Present day style impulses are quite different from what they were 20 years ago and many of the older manufacturers have dropped out because unable to keep up with the new style ideas. Time was when what one woman wore was of prime importance. Knowledge of what any social leader was wearing or would shortly wear was a business asset. At present no one cares what one or two women may wear, it is what the mass does that is important. The development of this element clearly fosters the trend toward larger individual shop production, and the future may after all hold improvement along this line which cannot be clearly foreseen from the present vantage ground.

Hope Lies in Cooperation

For years the industry has been working out its problems by itself, trying to get as much flexibility as possible in its relations with the maker of fabrics, trying to meet its labor half way but fearful of being made labor's pawn, endeavoring to get the maximum margin on all business to cover losses from dead stock, returned garments and the like. The present year holds a golden opportunity in the plan now under way for cooperative work between representatives of fabric mills and the garment trade to smooth out the points of friction between them and make their mutual business relations better defined and more profitable. The possibility of bringing the retailer into the circle is not to be overlooked, as his cooperation is necessary to make this business triumvirate function as it should. The garment man often does nothing more than pass back to the mill the trade abuses which the retailer practices on him, and the relations of all in the chain of distribution present merely phases of the one problem.

"Working for the Customer" at the Crompton Co.

A Story of How the Quality Idea Has Spread Through an Entire Organization—Represents One of the Principal Accomplishments of Industrial Democracy at That Plant—Has Proved Valuable Asset in Helping Company Meet Problems of Recent Trying Years

By Douglas G. Woolf

Textile manufacturers, in common with most other human beings, concentrate on one thing at a time. This year it's merchandising; last year it may have been plant efficiency; the year before, tariff; the year before that, industrial relations—and next year it will be something else again. Thinking of all these things at the same time and in their correct proportions seems to represent a physical impossibility.

But when we visited Crompton, R. I., recently, we were agreeably surprised to find that what was expected to be a story on Industrial Democracy was just as much a story on merchandising, on plant management, and on any other phase of manufacturing in general. In other words, the movement under way there represents a sincere attempt to co-relate all plant activities; to make the successful manufacture and merchandising of quality goods at a fair profit everybody's business.

That is the reason for the accompanying article.

"WORK for the Customer."

Signs bearing this slogan are plastered all over the interior of the plant of the Crompton Co., manufacturer of corduroys, velveteens and other pile fabrics, at Crompton, R. I.

Now, we are not a "slogan-ite." Most slogans bore us horribly. They are usually insincere or "smart-alecky" or something else like that.

But after a day at Crompton, we found that this particular slogan meant something. Its four words sum up accurately the objective which the Crompton Industrial Democracy has set for itself.

It is unnecessary for us to go into detail regarding the mechanics of Industrial Democracy. We have written many thousands of words about it in the last five years—and others have done likewise. The plan which has been in operation at Crompton for over two years is modeled after the one developed by John Leitch, the author of Industrial Democracy. It comprises three main features:

1. A system of employe representation patterned after the United States Government and including the House of Representatives, made up of elected delegates of the workers; a Senate, which comprises the overseers and other keymen of the plant; and a Cabinet made up of the chief executives of the company.

2. A system of economy dividends whereby savings effected through increased effort and greater cooperation are divided equally between management and employes.

3. A system of employe rating which expresses the individual performance of each man in the plant; records his improvement as it develops; serves as a guide when it is necessary to decrease the personnel; and, in short, represents a yard stick whereby the individual may be measured and his worth recognized.

But this is not a story of system. It is a story of results.

Effect on Quality

We asked Frank E. Richmond, treasurer of the Crompton Co., what Industrial Democracy had accomplished at his plant.

"The effect upon the quality of our goods," he stated, "so far overshadows every other result that I need not speak of anything else. In one year we have saved over $50,000 on a quality basis alone; that is, from decreased 'seconds,' fewer 'allowances' and better *average* price for our product. This $50,000 was of course divided equally between management and workers.

"But that's only the tangible saving. Of greater importance is the increased prestige and good will which we enjoy among our customers. They want quality goods, not 'allowances'—and they are getting more of the former and less of the latter than ever before. Orders are coming to us voluntarily from sections where we did little business before.

"And remember, I have not touched on quantity performance or on economy of operation. I haven't complete figures to give you on these items. I know we are making progress there every day but I'll confine myself to a discussion of quality—and its cumulative effect upon our future because a customer converted by quality today, becomes increasingly important as a source of revenue each year.

"And remember also that we are at the very beginnings of Industrial Democracy at Crompton. We haven't arrived anywhere. We merely think we're headed in the right direction. I might say we know it. Some day our story of results is bound to be far more interesting than any I can give you today."

That's what "working for the customer" means at Crompton. The idea has "caught on" throughout the whole organization.

Why the Customer?

But why the Customer? Why not make a slogan of "working for the employes," "working for the management" or "working for the stockholders?"

Because everyone in the plant has come to realize that no matter how much the employes like the mill as a place to work, no matter how highly the management regards the employes, no matter how firmly "sold" on the company the stockholders are—no one will prosper permanently if the customers don't like the goods.

Seldom in the history of the textile industry has this attitude been more important than during the last few years when buyers have had to be tempted with the best type of goods that could be made and when competition, particularly from the South, has been sufficiently keen to put many New England manufacturers in a "backs to the wall" position.

Which leads up to one of the most significant statements made by Mr. Richmond to the writer:

> "Our experience of the last two years has led us to hope—and believe—that Industrial Democracy, with its many ramifications, is the force which will enable us to continue to manufacture in New England and to compete successfully with the South despite the wage differential."

Probably no stronger endorsement of Industrial Democracy could be given—particularly by a man who shuns extravagance of expression and who thinks carefully before speaking.

So that is one of the results at Crompton—an emphasis on quality which has already resulted in marked savings and which promises far greater tangible accomplishments in the future.

Spurring up Management

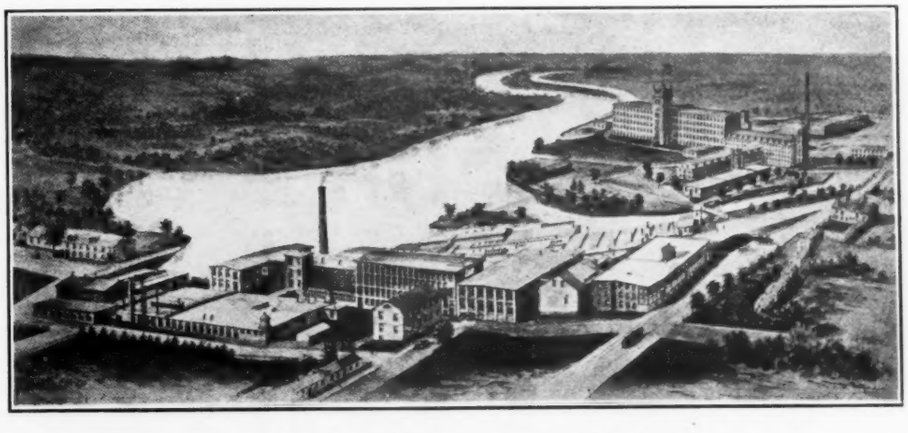
Another result—far more difficult to isolate but equally significant—has been the effect upon the management itself.

Not only has Industrial Democracy, according to Mr. Richmond, put the employes "on their toes" to effect plant economies, reflected in increased pay envelopes, but it has pushed the executives of the company as they have never been pushed before.

This was inevitable.

Under the system of open discussion of any and all problems affecting the earnings of both sides, the acts of each individual pass in reveiw. At any meeting of the House of Representatives, criticism of some failing on the part of the management is apt to be hurled like a bomb-shell. Such criticism has been invited—and is welcomed. *But* it puts a new burden of responsibility upon every one in executive control—the responsibility of answering to a large group of business partners for any and all acts affecting the interests of the whole.

And this "keying up" influence extends far. The gray goods mill which manufacturer cloth for



Plant of Crompton Co. at Crompton, R. I.

the Crompton finishing works is finding that organization increasingly critical of its fabrics. The superintendent of the gray goods mill asked Mr. Richmond recently why so many of his pieces were being rejected. "Well, you see," replied Mr. Richmond, "there are 800 people inspecting your goods nowadays instead of just one." In other words the Crompton operatives know that faulty gray goods mean more seconds and decreased return for everyone—so their critical interest extends to the zone of inspection so that a minimum of such goods may get into process.

The Incentive

In all this discussion, the writer has emphasized the question of profits, of economy dividends. He does so because he feels that this material asset, this tangible expression of extra effort expended, is possibly the most active incentive. This is not in the least a criticism of the operatives; it is true in all walks of life that honest gain for honest effort is a powerful spur.

But he does not believe, nor does Mr. Richmond believe, that it is the sole incentive. In the Industrial Democracy as operating at Crompton, an open game is being played. All the cards are on the table. The House of Representatives is told every two weeks how many orders have been received; how quality is keeping up; what the outlook for the future is. It learns the causes of the discharge of any workman—and any workman can appeal to the Justice Committee of the House for a review of his discharge. No one has anything up his sleeve.

And so in this, as in any other above-board game, the spirit of sportmanship comes into play. It's easy enough to cheat when you are defending yourself against a cheater, but it's almost impossible for the average man to cheat someone who is giving him a square deal.

That's the basis of relationships at Crompton today. Every operative is, in a way, on his honor to be square to himself, his fellow-workers, the company and the customer. The management is equally on its honor to play fair with the employes.

Individual Rating Cards

Probably it is this spirit of fair-play which has "sold" the organization on the idea of individual rating cards. Here is a chance to evaluate performance and worth, and to establish a basis for laying off operatives when necessary.

These cards are simple enough. Rating is based on four factors: Quality of work, quantity of work, experience and co-operation. The first two count a maximum of 25 points each, the third counts 20 and cooperation counts 30—making a theoretical total of 100. Rating of 70 or lower constitutes C grade; 70 to 85 B grade, and 85 to 100 A grade.

If men have to be dropped they are taken from the C and low B grades.

But this is only part of it. The company does not want C men, nor do the other workers want them. They hurt the progress of the whole. But they want C men to develop into B men or A men if possible. Consequently these ratings are reviewed periodically and each individual is given a chance to move up in the scale. That is the real value of the cards; they furnish an incentive for improvement.

The Background

There has not always been this spirit of cooperation at Crompton. The writer approaches this phase of his story with some trepidation—not because of any fear of the results of discussing unionism but because the subject is far too complicated to cover at all adequately within the space limits of this article. However, a brief reference to the romantic origin of Industrial Democracy at Crompton is pertinent.

Just after the strike of 1922 the Amalgamated Textile Workers were naturally exceedingly strong in the Pawtuxet Valley. Immediately an attempt was made to capitalize this advantage, and the Crompton Co. was made the focal point of attack. A systematic campaign was started to convert that plant into a closed-union shop and every weapon of sabotage and recrimination was employed.

Now the Crompton Co. has no fight with trade unionism as such. It believes, as does the writer that much good has been accomplished by organizations of workers themselves who help to set a fair market wage, on which premiums may be paid by employers for added effort and ability. It *does* object, however, to the *extraneous* union, one which does not really represent the workers but organizes them for its own financial gain.

It recognized such a union in the Amalgamated—and it fought back, with its cards on the table. It started an open correspondence with the head of the Amalgamated urging him to produce its plan for "cooperation" which it was featuring in its campaign.

To make a long story short, this correspondence, made public in full by the company, showed up the utter insincerity of this particular union.

The turning point was the ultimatum of the local organizer to the effect that no workers should enter the offices of the Crompton Co. for any sort of conference with the officials of the company—under penalty of dismissal from the union.

When the significance of this autocratic mandate was made clear to the workers, they themselves repudiated the union and its officers. They defied the order at a mass meeting called to decide on a Crompton strike; several hundred crowded around the doors of the hall, unable to gain admission, and added their "NO" to the clamorous negative of the assembly within.

This was the death knell of Amalgamated tyranny in the Pawtuxet valley—and evidently the death-knell of the organization itself.

But the Crompton Co. had no desire to prevent union organization among its workers. In fact the company itself encouraged another union, which it considered a fair one, to establish a local in Crompton and to organize the Crompton employes.

But by that time the spirit of Industrial Democracy had begun to permeate the plant and this, plus resentment of the tactics of the old Amalgamated, made the operatives unreceptive to any such attempt and the union abandoned the prospect.

Today the company is willing at any time to have a truly representative organization of workers within its plant as long as controlled by men who are working for the interests of the employes and not for their own gain.

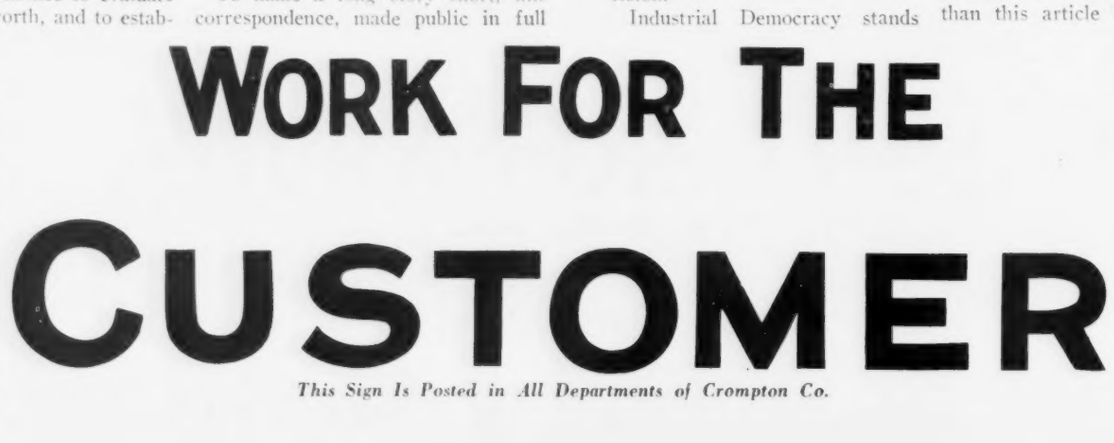
Fairness of the Majority

As an example of the fairness of mind which actuates the majority of men, we are privileged to reprint below the report of the Justice Committee of the House on a case of discharge, disputed by the individual in question. This report, which was entirely voluntary on the part of the operatives on the committee and represented the result of no advice from the executives of the plant, read as follows (names camouflaged for obvious reasons):

> In the case of John Doe, asking an investigation into the matter of his discharge, the Justice Committee offers this as its decision.
>
> Industrial Democracy stands for a system of cooperation between employer and employe, such as will guarantee to the employe fair and respectful treatment from the foreman, and also that he shall not be discharged without just cause.
>
> In return for this the employe guarantees to render a full measure of efficiency and loyalty in his work.
>
> This in brief is the interpretation which the Justice Committee places on the relationship between employer and employe, according to the principles of Industrial Democracy.
>
> In the present case, the committee believes that Doe was a good workman when he was himself, but, the records on file in the office, taken from letters of complaint sent by buyers, show that a great number of untagged defects were passed by Inspector "three" which was Doe's number. These letters, coupled with testimony lead this committee to believe that for some reason Doe was not as faithful to his work as he should have been, and this fact, together with the facts that he was absent on many occasions from his work, both with and without consent, thereby delaying progress; and that on the Monday previous to his discharge he asked to be out at three o'clock and did not return until Wednesday, and then offered no excuse for his absence. All this prompts the Justice Committee to decide that his discharge was justifiable.
>
> No concern can successfully operate by careless or indifferent methods.
>
> If the plant is to be known as a high class establishment, doing a finer grade of work and paying a higher rate of wages, then all must enter into the work with a spirit of attention and loyalty.
>
> (Signed)—Justice Committee.

The Future

Naturally the story still to be written about the Crompton Industrial Democracy should prove of even greater interest than the story of the last two years. The spirit of co-operation and give-and-take which is characterizing the combined efforts of management and employes just now should bear fruit in more ways than this article has indicated. To date, it has given a new outlook to a plant organized way back in 1850 and containing a building which was erected as a textile mill 110 years ago. This outlook is one of clearer understanding and greater mutuality of interest than has ever been possible before.



The Evolution of Tire Fabric

Resume of Progress Made Since First Use of Pneumatic Tires for Bicycles—Development of Cord Tires and, Recently, of Web Fabric

By A. E. Jury

Of the United States Rubber Co., New York

THE automobile tire has eventually ceased to be one of the motorist's principal sources of worry and is now one of the parts of a smoothly coordinated mechanism which requires little consideration and in fact gets rather more than its share of abuse. Every other working part of the car works against a known material under known conditions usually in the presence of a lubricant, while the tire works against the road under the greatest variety of conditions without any lubricant and the fabric structure of the tire does most of the hard strain resisting work. The cotton fabric or cord is depended upon not only to resist the normal traction and bursting flexing but it must resist the very unusual strains which tires are constantly subjected to incidental to running over large stones, car tracks and even an occasional curb stone, dropping suddenly into holes or off the ragged edge of asphalt or cement roads. In fact, cotton which is called upon to do most of the hard work in all the field of fibres is, in its function in automobile tires, harder pressed to uphold its reputation for durability than in any other article in which it is used.

During a comparatively few years the evolution of the present type of tire fabric and cord from the early bicycle fabric has taken place. It is of course obvious that a great amount of experimental work has been carried on by the tire and fabric manufacturers during this period of evolution. This work was extremely involved because of the great number of variables to be considered. It was necessary to test fabrics varying in weight and thickness and of various single yarn sizes and plied yarn constructions. Various counts for warp and filling had to be tried and different types and staples of cotton experimented with. Aside from their effect on the service of the finished tire, these fabric constructions had to be considered in connection with the tire building processes, calendering, cutting, etc. For instance, a change in thickness involved rearrangement of the bead construction. Tires made up to test new fabric constructions were subjected to tests to determine their resistance to puncture, separation, bursting and finally before any radical change was considered for production, tires were put on test cars and worn out to find how they would stand actual conditions.

While consistent research was being carried on in an effort to find the best kind of cotton fabric to use a great many experiments were being made with other fibres and with radically different weaves. Probably every fibre with the barest chance of success has at some time been tried out in tire construction as have also weaves of all kinds including twills, basket weaves, fabrics made with various arrangements of laid threads both in the warp and filling, fabrics with diagonal threads in addition to the regular warp and filling and even fabric in which wire was interwoven with the cotton yarn.

During the early development of the tire there was much popular interest shown in efforts to improve it and the fabric came in for its share of consideration. Every automobile owner was a potential inventor and since a great many ideas were submitted by people who had no previous knowledge of fabric or tire construction, many of them were impossible and fantastic. Still, many good ideas were presented and since the rubber manufacturers were not overlooking any chance of improving tires every possibility that seemed interesting was tried.

Pneumatic Tire Origin

The pneumatic tire which had its beginning with the inflated bicycle tire first appeared commercially in this country in about 1891 and met with considerable ridicule and objection from bicycle racing associations, but in spite of handicaps it quickly came into favor and within the next two or three years a variety of pneumatic tires were being made including several types of double tube tire and the single tube tire.

At this time the greatest difficulty lay in the proper construction of the fabric. Numerous experiments were carried out in the various factories making these tires. To obtain a satisfactory fabric every imaginable weave including sheeting, bed ticking, linen and silk was tried but it was not until what is known as square woven fabric was designed in about 1895 that the problem was solved. The design of this fabric was of fundamental importance in the construction of pneumatic tires.

This square woven fabric was designed to balance properly the strength and stretch of the warp and filling and was made with its threads so spaced as to provide at each intersection of warp and filling threads, openings of sufficient size to allow of the penetration of rubber through them during the process of coating the fabric preliminary to building the tire. In a tire built from such a fabric the rubber constituted a complete net work surrounding every thread, the layers of rubber between the various plies of fabric being connected by the rubber which penetrates through the fabric. By this means the separation of the fabric plies in service was materially overcome.

In the next few years a variety of square woven bicycle tire fabrics came into general use. These were all made on the same principle and were similar in construction, varying in weight and yarn size according to the needs of the various tire manufacturers and the weight and quality of the tires for which they were used. Most of these materials were made from long staple cottons such as combed Sea Island or combed Egyptian. Following are some of the typical constructions which were at that time in use:

	Square-Woven Bicycle Tire Fabrics				*Cord Bicycle Tire Fabrics*	
Weight Oz. Sq. Yd.	14	12	10	8	8	6.5
Count	27 x 27	32 x 32	49 x 49	36 x 36	49 x 4	38 x 4
Warp Yarn	20/6	20/5	24/3	20/3	24/2/3	22/5
Filling Yarn	20/6	20/5	24/3	20/3	26	26
Cotton	C.S.I.	C.E.	C.S.I.	C.E.	C.S.I.	C.S.I.

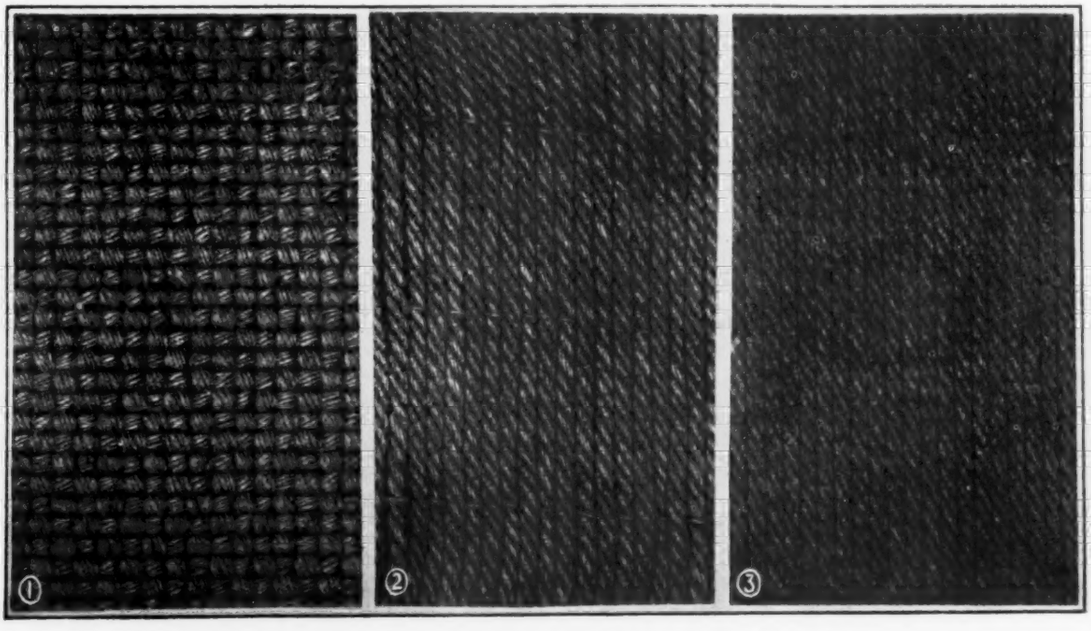


Fig. 1, Square Woven Fabric; 2, Woven Cord Fabric; 3, Web Fabric

Cord or thread fabrics were used in bicycle tires as early as 1894, but in the United States the production ran principally to fabric tires.

When the first automobile appeared and produced a demand for pneumatic tires heavy enough to resist the strains which this type of vehicle would impose on them, bicycle tire fabric was so obviously correct in construction that it was necessary only to increase its weight and strength to make it serve as a basis for the manufacture of these heavier

tires. The fabrics used in these early tires varied in weight from 10 oz. to 22 oz. and fabrics both lighter and heavier were experimented with. During the first years of the automobile industry cars increased very fast in weight and power and in view of the condition of the roads over which they travelled there is little wonder that tire manufacturers were faced with almost insuperable problems to make tires which could be uniformly depended upon to give even a fair account of themselves.

Up to about 1910 a great many fabric constructions were being produced and used in the different tire factories; in fact, fabrics of widely different constructions were frequently used in the same factory for different sizes of tires. By a gradual weeding out process, however, something approaching a standardization was finally reached and shortly after 1910 most of the square woven fabric was made from 23/11 ply yarn warp and filling, weighing from 17¼ to 17½ oz. per sq. yd. and counting approximately 23 square. At this time most of the fabric was made from combed long staple.

However, the refinements necessary to make the fabric exactly meet the tire manufacturers needs were slow to come about, largely because of the difficulty the tire man had to tell the cotton man just what he wanted. Tire producers were essentially rubber manufacturers and the fabric was being made by cotton manufacturers and neither understood the other's language. The former knew the conditions to which the fabric must be subjected and the strains it had to withstand but he did not understand the difficulties of the cotton manufacturer to make fabrics to exactly meet these conditions and in fact the cotton man had for the most part only a vague idea of what happened to his fabric in the rubber factory. Furthermore, the cotton manufacturer could not with the machinery at hand, which had been designed for making fabric for less exacting purposes, produce a material just as the tire man wanted it.

It was only through the closest cooperation between the cotton and rubber manufacturers, which resulted in some cases in the development of special cotton machinery and in many instances in the building of mills particularly designed to make tire fabrics, that it became possible to produce fabric accurately adapted to the tire manufacturer's needs.

Testing Committee

Expressions which were entirely new to the cotton industry such as "crimp" and "off square" began to come into use and in 1914 representatives of tire and cotton manufacturers realizing the need for a language which they could both understand, arranged with the American Society for Testing Materials for the establishment of a standing committee in that society to provide test methods and specifications for tire fabrics. The first test methods were presented tentatively in 1915 and were adopted in amended form as standard in 1920. This committee, known as Committee D-13, is now one of the largest committees of the society with its activities extended to other branches of the textile industry and includes representatives of manufacturers of nearly all the tire and tire fabrics made in the United States.

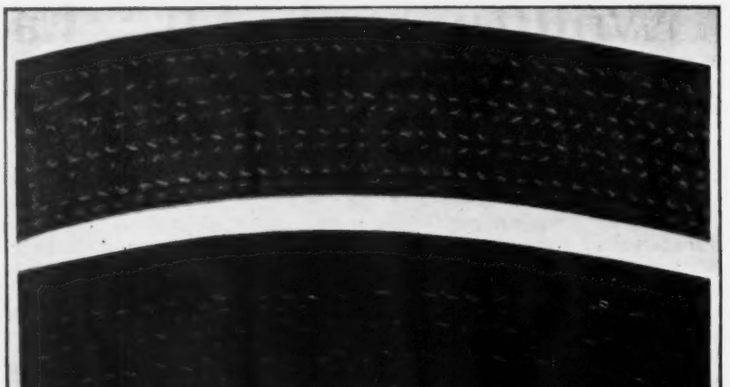


Fig. 2: Above, Section of Tire Made with Web Fabric; Below, Section of Tire Made with Cord Fabric

Cord Tire Development

As soon as automobile tires began to run into big production a good deal of thought was given to the use of cord in tire construction. Experimental work carried on in the various tire factories very soon began to demonstrate the superiority of cord tires over those made from square woven fabric. Tires made of cord were found to give so much greater mileage than the corresponding sizes of fabric tires that although the cord tires were higher in price the public was quick to appreciate the marked advantage and the consumption of cord tires grew so that in 1922, about eight years after the beginning of their popularity, half of the tires being consumed in the United States were cord tires.

There were a number of reasons for the immediate success of cord as a strain resisting element. Probably the most important advantage lies in the fact that in cord construction all the cotton in the tire is working while in fabric construction it is almost impossible to balance the fabric and keep it balanced during all the processes of tire manufacture so that advantage is taken of all the strength both in the warp and filling of the fabric. Another important reason why cord is better than fabric is similar to the reason already mentioned for the advantage of square woven fabric over fabric through which the rubber cannot penetrate. At every thread intersection in square woven fabric two faces of cotton yarn are held together so firmly by the close weave that the rubber is not forced between them in the calendering process and the strands of plied yarn are consequently not individually surrounded with rubber for their entire length so the network of rubber connecting all the plies is not so complete as it is in the cord tire.

In factory practice there were two widely different ideas for cord tire manufacture. One involved the use of the so-called woven cord fabric from which the multiple ply cord tires were made and the other used the large cord which was coated with rubber, the tires being made by laying these cords separately in place. These latter were known as two-ply cord tires. The cord fabric from which multiple ply tires were made was composed of small cords for which 23/5/3 was a common construction, woven with fine filling yarn about 2½ to 3 picks per inch. The number of ends per inch varied from as low as 18 to a maximum of as many threads as could be crowded into the fabric without their riding over each other, generally not more than 28. The cord for the two-ply construction was mostly made of yarn of about 17s size cabled and recabled until the required size was obtained. The production and equipment development in tire factories has been principally directed toward the manufacture of tires using the small cord construction and today most tires are made from this type of cord.

Web Fabric Development

As soon as the cord tires began to show their superiority, attention was directed to the advantage which could probably be obtained by the use of cord of the construction used in multiple ply tires but without the filling threads, it being reasonable to assume that tires which were so greatly improved by the use of cord instead of square woven fabric could be still further improved by entirely eliminating the filling threads. Experimental work was carried on over a period of several years but it was not until the web fabric was developed by the United States Rubber Co. that a material of this kind could be handled practically in regular production. This is made by running cords sufficient in number to form the required width of fabric from cones supported on a creel through thread boards and a comb over a roller where they are brought into parallel relation to each other and then down through a bath of latex with which they are impregnated. They then pass immediately to a set of dry cans and when dry the cords are held firmly together by the rubber deposited from the latex, thus forming a fabric which is wound up and handled as other fabrics in the subsequent calendering and tire building processes.

Web fabric and other types of fillingless fabric have entirely superceded the woven type of cord fabric in some of the larger tire factories and show evidence of being used generally. The latex treatment gives the cords in web fabric a surface covering of pure rubber which has not been subjected to any of the mechanical or chemical treatments to which rubber is ordinarily subjected to get it in condition to apply to fabric by the calender process and this layer of latex rubber serves as a bond between the cord and the rubber which is applied on the rubber calender. Another advantage is shown quite clearly in Fig. 2. It is evident in the lower picture that through the unevenness of the surface of the coated woven fabric it is inevitable that occasionally two knuckles caused by the weaving of warp cords and filling threads in two adjacent plies of fabric must be forced so closely together that there is practically no protecting rubber between them while in the upper it is clear that each cord is surrounded uniformly with a protective layer of rubber.

Productive Status

In general both fabric and cord have been gradually improved from the point of view of accuracy of manufacture, quality and uniformity through the increasingly stringent requirements and the efforts made by the cotton manufacturers to meet them. While these materials must and will be improved still further, particularly in the direction of greater uniformity, they represent without doubt the highest degree of accuracy so far attained in the production of any textile material. From a production point of view the quantity of fabric consumed in tire manufacture is of great imortance to the cotton industry. In the United States these materials have risen from about 40,000,000 lbs. used in 1914 to a reported consumption of 220,000,000 lbs. in 1925. During 1914 practically the entire amount consumed was square woven fabric, while in 1925 approximately 190,000,000 lbs. or 86% of the total amount was cord.

When it first became apparent that balloon tires would become an important factor in tire production, fabric manufacturers were apprehensive of the effect this change might have on fabric requirements. From figures so far available for 1925, however, with balloon tires representing a substantial proportion of all cord tires made, there is little if any change from 1924 in the average amount of cord used per tire.

Correct Textile Inventorying

Methods by Which the Taking, Costing and Checking of Raw Material, Stock-in-Process and Finished Goods May Be Simplified in Mills Which Do Not Make Use of Continuing Inventories—Methods Have Close Relation to Profit

By Eugene G. Boutelle

Member of Staff of Lybrand, Ross Bros. & Montgomery, Boston Office

Financial success or failure in business depends, in great measure, upon the care and intelligence devoted to determining the quantities of stocks on hand and a fair valuation to be put upon them. The resulting information may govern the payment or passing of dividends, assist in securing needed loans or in reassuring a present lender. These are vital elements of any business and especially so in any highly competitive one operating on narrow margins with heavy borrowings, a situation in which a considerable portion (possibly the greater part) of the textile industry finds itself at the present time.

The purpose of this article is to outline methods which will be helpful in arriving at accurate quantities and proper valuations for raw materials, work in process, finished goods and supplies which a mill owns at a given date. Bear in mind that in almost every mill the total value of inventory is the largest single item among the quick assets.

ORDINARILY an inventory is taken for the purposes of the financial statement or balance sheet which purports to exhibit the assets, liabilities and net worth of the concern as at a given date. In common with all the other items of the balance sheet, the inventory must be shown as of the date of the balance sheet, not as it appears a few days earlier or later. All classes of inventory change rapidly from day to day when the mill is operating.

Synchronizing the Inventory

It may be possible to arrive at substantially accurate inventory quantities in textile mills while the machinery is running, but most attempts at stock-taking in the midst of active operations produce incorrect results. The customary practice is to complete the work of recording quantities between Saturday noon and Monday morning when normally the machinery is at rest. This will produce a satisfactory result when the balance sheet date falls upon either Saturday or Sunday, but ordinarily not otherwise. There are two methods which if carefully and conscientiously followed will result in an inventory as of the date of the balance sheet. One is to shut down the plant at the close of the day on which the balance sheet is dated, whether or not that date happens to fall upon a week end, and to start up again only after the taking of quantities has been completed. The other is to take inventory over the week end and to adjust other assets and the liabilities to correspond. In other words, the first method contemplates taking inventory on a given balance sheet date while the second provides for preparation of a balance sheet as at a given inventory date which may be a few days earlier or later than the end of the month.

Preparation for Inventorying

Preparation for taking inventory should begin well in advance of the actual date. Stock in process in each department should be reduced to the lowest point consistent with economical operation. Open from original bales, bags or cases as little as possible so that at the inventory date a minimum quantity of stock outside of original packages will be back of the first operation. Clean up so far as possible the stock back of each operation and push forward its product into the next operation. Keep the work of cloth room and finishing department well up with the product of the weave room. The necessity for surplus stocks of roving and yarn, filled section beams and the like becomes greater as the product of the mill becomes more varied and more complicated in construction. The surplus stock should be counted or verified and plainly marked several days before the inventory date so that the quantities may be recorded without loss of time on the day of the inventory.

Raw Materials Easy

Ordinarily raw material presents few problems. For the most part it is to be found in original bales, bags or other packages with the weights and quantities marked upon them or, at least, identifying numbers by means of which weights may be determined by reference to book records or original invoices. Every mill should have some kind of book record showing by individual bales what should be on hand. The taking of this part of the inventory can be done with safety several days before the inventory date and compared with the book record which then is corrected to conform to what is found to be on hand. Care in writing up the book record for the next few days prior to the inventory will give the correct quantities as at the inventory date. The inventory should include raw materials and supplies in transit invoiced by the vendors on or before the balance sheet date, and care should be exercised to include such invoices among the liabilities unless, of course, they have been paid on or before that date.

Estimates Necessary

Stock in process must be stated in pounds, and, while it is expected that this part of the work will result in a true statement of the quantities owned by the mill at a given date, there are certain limitations upon accuracy due to the nature of the processes. Actual weighing of all the full and partly full bobbins, spools and other packages or containers on the floor and in the machines is impossible. The pounds must be arrived at for the most part by counting the full bobbins, spools or other packages and containers and multpilying by a standard weight for each kind of package or container when it is filled. The standards should be checked up prior to the inventory to see that they accurately represent the average weights of stock in full packages or containers. The pounds of stock in partly full packages or containers can be determined only by estimation but a well defined method of estimation should be laid down and overseers instructed accordingly. The usual method is to consider the partly full packages or containers as half full on the theory that the average between the almost full and the nearly empty is thus represented. Ordinarily such a method will give a satisfactory result in that the quantities will not be overstated. Overseers, however, should be cautioned against the strict application of this rule when all or most of the partly full packages in a given room obviously are less than half full, in which case only good judgment can be relied upon to estimate the degree of fullness.

Beam Records

Ball warps and section beams frequently are weighed and tagged when they are made, but in the absence of this practice weights must be calculated according to the usual formula from the known lengths, counts of yarn and numbers of ends. Warps on loom beams if of varying lengths should be tagged with the number of standard length cuts when they are made. Inventorying then consists merely in recording the total cuts of each style from which later the weights are readily calculated.

In the weave room the best practice, at least from the standpoint of the inventory, calls for placing on the loom with every new warp a set of tickets, one for each cut in the warp, and showing the style number, loom number and sometimes other information. A ticket is fastened to each cut of cloth by the weaver as it comes off the loom so that the remaining tickets represent the number of cuts left on the warp, which, for purposes of the inventory, are counted and reduced by the cut or portion of a cut woven into cloth but not yet removed from the loom. Where the ticket system, briefly described above, is not in use it is necessary to resort to estimates of the degree of fullness of the warps in the loom, the weight or the number of cuts in a full warp being known. For this purpose a graduated wooden stick is used for measuring the space from the rim of the beam head to the partly woven warp thus indicating the degree of fullness.

Pick Counters Simplify

At the front of almost every loom on inventory day there will be part of a cut, and in some cases one full cut and part of another, of woven cloth and these must be estimated as portions of cuts, usually as quarter, half, three-quarter or full cuts. When pick counters are used for making up the weavers' payroll the amount due to the weaver for the cloth on the loom can readily be calculated when the unpaid payroll is determined for the balance sheet.

Many mills have no pick counters and pay weavers only after the cloth is taken off and delivered to the cloth room. In this case the weavers' pay for cloth on the loom which clearly is a liability and in some cases one of considerable size, should be estimated and included on the balance sheet in the unpaid payroll. If the amount is small it may, perhaps, be ignored with safety but in that event the cloth should be taken as yarn and so valued. That is to say, the warp in the cloth should be included with the cuts remaining on the loom; the filling in the cloth should be estimated and included with other filling at the loom or on the floor.

Little or no estimation need be done in the cloth room or in the finished goods storeroom whether this portion of the inventory is taken in pounds or yards. A complete record should be maintained showing the contents of each case or bale put up and held for stock or for a customer. The stock of cases or bales should be listed by the numbers, and discrepancies between

the list and the record should be investigated. The total yards or pounds may then be accumulated from the record excluding those cases or bales which may have been billed to customers and held for later shipment.

Simple Systems

The labor of counting the numerous items of supplies is often considerable. There should be well defined effort to keep the volume of this part of the inventory within bounds by limiting purchases to what can be consumed within a reasonable time. Machine parts must be kept on hand in order to avoid interruption of production, but much can be done to reduce the quantities carried if care and attention are given to it. When a well designed book or card record of supplies is in use it can be corrected by physical count well in advance of the inventory date and the final inventory drawn from the record.

Coal must be estimated unless a record is maintained similar to that mentioned for other supplies. The pile, of course, should be inspected to see if the quantity called for by the record appears to be reasonable. Where sufficient room is available coal can be stored in moderate sized piles. Consumption drawn from one pile until it is exhausted presents fairly frequent opportunity for correction of the record which then should represent at all times the quantity on hand with substantial accuracy.

Need of Double Check of Estimates

Each overseer is usually held responsible for the inventory quantities of his department and is required to deliver to the office a summary showing the total pounds or yards of each kind of material. Where second hands take the quantities, overseers should be required to inspect the work carefully to make sure that it has been properly done and especially to see that where estimation is necessary the stock is not overstated. The first taking down of quantities should begin at one end of a room and progress in an orderly manner to the other end avoiding at this point the assembling into one total different lots of one kind of stock which may be located at different points in the room. This will tend to avoid omissions and will assist in the later inspection of the work by the overseer or whoever may be delegated to that duty. It is helpful to have the first taking down of the inventory quantities done on uniform sheets conveniently ruled for the purpose with spaces for the initials of the person who did the work and of the one who approved it. If the later condensations or summarizations are prepared on sheets of the same size the whole can be assembled in a binder for ready reference in the event of any question.

Summarizations of quantities and calculations of total weights usually are done by overseers' clerks. Opportunities exist for substantial errors in this work and it should be carefully verified by some responsible and competent person. Accuracy cannot be secured without such verification and it should be applied to every step of the work from the first recording of quantities to the final pricings, extensions and revisions.

Where a competent office organization of sufficient size is maintained, excellent results have been attained by sending its members out into the mill to verify inventory quantities and the subsequent summarizations and calculations of weights. A feature of this method of verification is the preliminary arrangement of a schedule showing the time on inventory day when each department is expected to be ready and will be visited by the verifiers.

Difficult to Develop Standards

Testing the accuracy of a stock in process inventory by means of standard pounds per spindle may be reliable if the standard is set by the mill from its own experience and changed from time to time to meet changing conditions. Certainly no one standard pounds per spindle is applicable to all kinds of mills in any one of the major classes of cotton, woolen, worsted, etc. For example, a colored goods cotton mill is likely to have legitimate use for a larger quantity per spindle of stock in process than a grey goods mill, one making novelties more than one producing staples; great variety of product calls for more stock in process per spindle than an output composed of only a few styles. The invisible loss test also may be reliable if it is based on the mill's own experience. These tests will serve to indicate any large discrepancy, but generally they are unsatisfactory because they can be applied only after complete assembling of quantities which often is too late for investigation and proper correction.

Nominal Valuation of Inventories

Much has been written and said relative to the merits of various methods of valuing an inventory. It is the belief of the writer that in the past most mills have erred on the conservative side. In some cases merely nominal valuations, (as low as 2c per pound for cotton in bales and in process) were placed on raw materials and stock in process. Some New England treasurers admittedly priced inventories low at the close of profitable years and higher at the end of years when business was poor thus distorting the annual profits. Dividends were paid regularly and apparently were covered by current profits.

The adoption by the Treasury Department of the rule of "cost or market whichever is lower" for the calculation of taxable income did much to bring about more uniform practice. This principle is well recognized as conservative practice giving to the mill all that it is entitled to in the way of a good showing, and, if carefully applied, representing a total valuation which it is expected will be realized together with a fair profit, the final test of any inventory valuation.

No particular difficulty ordinarily is experienced in determining the cost of raw materials on hand. Strictly it means what was paid for the actual bales, bags or other packages remaining on hand. Ordinarily it is the part of good management to put into process the oldest purchases of specific grades; the stock on hand then will represent the last purchases at the prices then prevailing. If this practice should not be strictly followed there is no objection to considering that which remains on hand of each grade as representing the last purchases and pricing it accordingly provided that the quality is up to the customary standard.

Woolen and worsted mills that buy wools later to be sorted into several grades are confronted with the problem of valuing what remains on hand of each grade. Here the purchase price represents the average cost of all the grades in a given lot. It is too high for inventory valuation if only the lower and rejected grades remain on hand and conversely too low if the grades on hand are the higher qualities exclusively. A general practice is to assign prices to the various grades of a lot at time of sorting based upon experience in the market. A more logical method is to distribute the total cost of a lot over the various sorts in proportion to market values of those sorts at time of purchase and to add the cost of sorting.

Stock in Process

Cost as applied to the inventory of stock in process should include the cost of the raw material adjusted for waste and the cost of manufacture (labor and overhead) up to the point in the processes where the stock is found on inventory day. If the mill has not been running at its regular rate its unit manufacturing costs are likely to show substantial increases (unless the cost system provides for such abnormality) due to the impossibility of reducing expenses in direct proportion to the reduction in output. Such inflated costs cannot be used for inventory valuation if a reasonable and conservative result is sought. Manufacturing costs applied to the inventory should not be higher than they would be if the mill were operating at its normal capacity. Similarly the costs of finished goods used for valuation of the inventory should be calculated with normal production as a basis.

Cost for purposes of inventory valuation should be the bare cost of manufacture and should not include interest on borrowed money, selling, general administrative or other expenses not attributable to the producing end of the business.

The principle of "cost or market whichever is lower" means that whenever the market value of any item of the inventory is lower than its cost, the market value should be substituted for cost. But market value is not always readily determined. The Treasury Department has defined it as follows, "Under ordinary circumstances 'market' means the current bid price prevailing at the date of the inventory for the particular merchandise in the volume in which ordinarily purchased by the taxpayer." When the market exhibits a marked downward trend at the time of the inventory and there is reason to believe that the declining tendency is not a temporary fluctuation, the estimated shrinkage in inventory to be sustained in its liquidation should not be deferred but should be given effect in the current valuation.

The application of "market" to stock in process and to finished goods ordinarily may be accomplished by substituting market values in place of costs for raw materials and adding the normal manufacturing costs unless the prices for goods are lower or expected to be lower relatively than those for raw stock. In this event inventory valuation should be reduced to a point which clearly is sound.

The valuation of raw materials, stock in process, dyes, chemicals and other supplies which are of unsuitable quality, together with seconds, obsolete styles, damaged goods and the like should be governed by what it is expected can be realized from them.

OVER-PRODUCTION MENACE

By B. B. Gossett

President Chadwick-Hoskins Co., Charlotte, N. C.

The textile industry started the new year in much better shape than a year ago. Stocks were smaller and the volume of business booked for forward delivery was in substantial quantity at prices that in most instances would net the mills about replacement and in a few cases a small profit over replacement. For the first time in several years cotton is in abundant supply and prices are comparatively reasonable and unusually stable. This should go to make good business, so if the mills will only profit by their experience of the past and beware of over-production, I can see no reason why the year 1926 should not be fairly profitable.

OVER-SUPPLY RELIEVED

By George S. Harris

President Cotton Manufacturers Ass'n of Georgia

It is difficult to say anything at this time with reference to the immediate outlook for textiles that has not been said and published. My opinion is that textile mills generally will continue volume business throughout the current year. The last few years have seen considerable shifting which has resulted in a much better balanced production. There appears to be more shifting necessary, but improvement has been made which very greatly relieves the pressure from over-supply in certain lines.

Cotton and goods are soundly priced and will probably range between narrow limits, eliminating a trouble that has interfered with forward business over a period of several years.

Boll Weevil Still a Potent Menace

Hot, Dry Weather Last Spring and Summer More Responsible for Reduced Weevil Damage Than Small Emergence—Winter Weather Favoring Hibernation on Large Scale—The Menace and Need of Control Measures as Great as Ever Since 1915

By George A. Maloney
Delta Laboratory, Tallulah, La.

THE boll weevil, so far as it may be a factor in reducing the total yield of cotton in the United States is periodically of great concern to the cotton growers and to all others whose interest may in any way be affected thereby. The large crop of 1925 has led to the very general impression in some quarters, that the weevil has been brought under control by the growers through the application of measures directed towards its destruction and has ceased to be a serious menace to the crop in the future or an important factor in reducing yield.

Factors of weather, and other conditions existing during the past crop season, which were most favorable to a large production and unfavorable to extensive boll weevil damage generally, seem to have been lost sight of or their importance minimized. The character of weather prevailing during the past two winters and summers combined to exercise the greatest degree of natural control of the weevil that has ever been known.

Causes of Reduced Damage

The spring of 1925 marked the lowest record in number of weevils surviving the winter, over a period of ten years' observations. Dry weather with unusually high temperature which prevailed over a large part of the cotton belt during the first half of the past summer prevented weevil multiplication in sufficient numbers to do any very serious damage generally. Rains during the latter half of the season in some sections, produced conditions in many fields that enabled the weevil to multiply rapidly. Where these favorable conditions existed weevils were produced in such large numbers that in some fields, especially in Louisiana, from 50 to 75% of the squares and bolls were damaged before measures of control were applied.

In the control of the weevil in Louisiana in 1925 airplane dusting was resorted to on upwards of 50,000 acres of cotton. The use of poison to prevent weevil damage was necessary in many other localities in the Cotton Belt, mostly in those areas lying more or less adjacent to the Gulf Coast, though the total acreage of cotton which required dusting with calcium arsenate was small compared with most previous years. Rains continuing late in the season in some sections, produced a second growth of fruit which afforded weevils ideal conditions for increasing and securing food necessary for successful winter hibernation.

Over a considerable part of the Cotton Belt, extremely dry and hot weather extended so late into the summer that plant growth was entirely stopped or greatly checked with little or no late fruit produced upon which weevils could have fed or reproduced. Scattered throughout the states in the western section of the belt, the cotton leaf worm stripped many fields late in the season of all foliage and small bolls and squares, thus depriving weevils of further food and the means for multiplying. Weevils that were in these fields at that time either succumbed to the extreme heat or were consumed by the leaf worm in the course of their feeding upon the small bolls and squares, though some, in all probability, migrated to other fields where growth continued and where conditions were found favorable up to the occurrence of frost.

The use of airplanes solves many of the problems presented in control of the weevil. Dusting is done under contract by commercial organizations at a reasonable charge per acre. Conditions which often make the operation of ground-operated dusting machines impossible when most needed, have no effect upon the airplane. The type of airplanes at present in use distribute the poison dust over the fields at the rate of from 600 to 1,000 acres per hour.—Photo U. S. D. A.

Serious Recurrence Is Possible

While the weevil infestation in 1925 may be said to have been unusually spotted even in the late season, its distribution was very widely scattered over practically the entire cotton belt with much smaller numbers being reported in the northern sections of the belt than in the southern sections. In Texas 19 counties scattered through the main cotton belt of the state from Brownsville to the Oklahoma line, and from the Louisiana line to Tom Green County on the west, were sufficiently heavily infested with weevils very late in the season to present a very serious menace in the 1926 season should winter weather conditions prove favorable to their survival in hibernation. Louisiana presents a similar situation with weevils present in rather large numbers late in the season in 12 of its chief cotton producing parishes. With 20 scattered counties in the State of Mississippi, more or less similarly infested, there is a strong probability that the western half of the cotton belt, with winter weather conditions favorable, may suffer a recurrence of severe weevil damage in 1926.

In the south-eastern states, the same scattered weevil infestation existed; the eastern half of North Carolina having a rather large number of weevils in the fields up to frost which occurred about the middle of October. Twenty-two counties in the State of Georgia, scattered throughout the central two-thirds of the state, are reported to have had a considerable weevil population late in the season. South Carolina reports seven counties scattered across the central, north-eastern and north-western section of the state as having produced a more or less heavy weevil infestation late in the season. The numbers of weevils reported present in these localities just prior to the occurrence of killing frost, presages a considerable number having gone into winter quarters in those localities.

The severity of the winter temperatures will be the controlling factor in determining the percentage of survival or the rate of mortality before the warm days of the spring months of 1926. Any attempt at a forecast of the numbers of weevils that may survive the winter at this time would be the merest guess-work, yet in the light of past experience, it may be safely predicted that while the numbers that will emerge next spring may vary greatly in different localities, a sufficient number to become a menace to the 1926 crop may confidently be counted on, since in previous years, temperatures close to zero have failed to effect their complete extinction. To what extent even a very few weevils emerging from hibernation in the early spring may be capable of reducing the cotton yield, will depend almost entirely upon temperatures and rainfall and to a very large extent on what manner and over how long a period the precipitation occurs.

Rains during the early growing season would be favorable to the rapid reproduction of weevils, with great damage possible before the crop could be set, in which case the application of measures of control would be required which might have to be repeated over a period of several weeks. Rains deferred until the latter part of the season, with dry weather attended by high temperatures intervening, might have the effect of holding the number of weevils down to the point where control would not be required, though any condition favoring the weevils' increase which might develop would call for control measures even as late as late August or September as was made necessary in 1925 in some localities.

Eternal Vigilance Necessary

The weevil is a very hardy insect and a voracious one, vulnerable only to the very extremes of temperature and the attack by its natural insect enemies, and submissive to men only when fought by him with the utmost vigor and with the deadliest of poison, so thoroughly distributed over the cotton plant that its feeding and drinking is made almost impossible without fatal results. So insidious is the weevil in its habits of attack upon the cotton plant that the greatest vigilance on the part of the farmer is always necessary to discover its presence and activities in his fields in time to prevent serious losses from its ravages.

Must Continue Control Education

Notwithstanding that there has been a very marked increase in the past few years in the number of cotton growers who have learned how to fight the weevil intelligently, there still remains a great task before the South,

to extend the work of education to many growers in all of the states and there is not the slightest basis of fact for any belief or assertion that the weevil will not continue to be a factor which cotton growers in the United States will have to reckon with and be prepared to fight with for their crop, for many years yet to come. No law exists compelling the farmer to use any method to prevent weevils damaging or destroying his crop. He is free to utilize any means for making his cotton crop what he may choose, and will use such means as he may be led to believe will give him the greatest protection and the largest yields of lint per acre. Any degree of protection from the ravages of the weevil that he may enjoy in the future will be dependent upon his own vigilance and energy or upon the saving intervention of weather and such control as the natural enemies of the insect may exercise over it in different seasons. In fields where weevils are known to have been present late in the past season, there is the greatest danger of their appearance in the same or nearby fields in the coming spring. For the cotton grower to relax in his vigilance and neglect preparation for meeting their attack would be to invite serious loss.

While weevils at no time are found in large numbers in all cotton fields and may never do very serious damage in certain localities, because of local conditions unfavorable to their progress, it is safe to anticipate that variable damage will continue to be the cost that will be imposed for failure to adopt protective measures in seasons of heavy infestation, over the greater part of our cotton producing acreage.

Control by Airplane Dusting

The Department of Agriculture, fully appreciating the farmers' need for more effective and economical means for preventing annually recurring damage by the weevil, is continuing and extending its experimental and development work at its laboratories at Tallulah, La. Until airplanes were first utilized experimentally in 1922 by the scientific force of the Department at Tallulah, the weevil presented a problem of control for each individual farmer on his own fields, and frequently at a prohibitive cost. With the improvements developed in airplane construction and dusting operations during the past three years by the Tallulah Laboratories, commercial cotton dusting has become established in a number of important cotton producing sections in co-operation with communities of growers over large areas of weevil infested cotton, and has shown a considerable saving in cost of the operation to the growers, with a greater measure of control secured.

By whatever manner poison may be applied to cotton for weevil control in the future, the more general its use becomes in sections of heavy infestation, the nearer we will approach a solution of the weevil problem and the annual production of a normal cotton crop.

No Large Increase in Cotton Carry-Over

Unlikely to Be Much in Excess of Average of Recent Years—Consumption of About Twenty-Four Million Bales by World Spinners Will Assure This—Most Uncertain Factor Is Future Price of Cotton—Figures on Supply and Distribution of American Cotton

By Alston H. Garside

Director, Cotton Information Service, Merchants National Bank, Boston.

WORLD production of cotton, counting foreign as well as American growths, is larger this season than for several seasons past, if not the largest in the history of the trade. Even allowing for a substantial increase in world consumption, the probabilities are that the world will not use as much as it has grown this season and accordingly a portion of the current crop will be carried over into next season.

The world's commercial growth this season is estimated at about 25,950,000 equivalant 478-pound bales exclusive of American linters, against 23,782,000 last season, 19,050,000 two seasons ago, 18,091,000 three seasons ago and 15,128,000 four seasons ago. It is thus seen that production has increased steadily and at an extraordinary rate during the past four years. The world's crop this season was actually 10,800,000 bales larger than that of four years ago.

Production has increased greatly both in this country and abroad during these years. The domestic crop this year is about 15,650,000 bales against only 8,215,000 four years ago and the total foreign crop is about 10,300,000 equivalent 478-lb. bales against 6,913,000 four years ago. It is thus seen that production of cotton in this country has increased about 7,400,000 bales and in foreign countries about 3,400,000 in the four years.

Numerous countries have contributed to the increase in foreign production. Egypt has increased its crop about 600,000 bales, India about 750,000, Mexico about 100,000, Russia about 950,000, China about 350,000 as compared with that of 1921-22, and the smaller cotton-growing countries including Uganda, the Anglo-Egyptian Sudan, Turkey, Persia, Korea, Argentina and about twenty-five others have increased about 600,000. The increase here given for China is merely in that portion of the crop which is used in the mills of China or exported by that country, as reliable figures are not available on the total growth of China.

Had Been Facing Cotton Famine

This great increase in world production does not indicate, as one might judge off-hand, that an excessive supply of cotton has been accumulated or is being piled up in the world's markets. In comparing production this year with that of four years ago, one is comparing a very large world crop with a decidedly sub-normal one. The fact is that the crops of four years ago, three years ago and two years ago were so far below the world's requirements that if production had not subsequently increased a cotton famine would have ensued, millions of cotton mill workers would have been thrown out of employment, and the world would have experienced a great shortage of clothing. Production has been increased largely as a result of the high prices which cotton has commanded, which have reflected the world's need for cotton.

Allow Building Up of Reserves

The fairly large crop produced last year and the still larger one grown this year have been greatly needed for the rebuilding of reserve stocks which were decreased during the three years of sub-normal production, and to take care of the increasing consumption of the world. During the seasons 1921-22, 1922-23 and 1923-24 world consumption was about 8,700,000 bales in excess of production in those seasons, with the result that spinners drew on stocks accumulated in previous years to that amount. Consumption would have exceeded production even more than that if it had not been checked by the very high prices to which cotton went in consequence of the shortage. Notwithstanding the restrictive effects of high prices, world consumption has greatly increased in the past few seasons. Last season the world used about 22,652,000 bales against 20,019,000 in 1923-24 and 19,822,000 in 1921-22, the increase in the three years being about 2,800,000 bales.

Price is Key to Carry-Over

In considering world production this season and endeavoring to foresee its effect on prices, one must consider also the carry-over of cotton at the beginning of the season and the probable consumption. As to the carry-over at the beginning of this season while it was larger than at the beginning of last season it was certainly below normal, totalling only about 7,108,000 bales against an average of about 9,000,000 bales on corresponding dates in the past few years. As to probable consumption, it would not be surprising if consumption this season were around 24,000,000 bales in which case the carry-over at the end of the season would be about 9,000,000 bales which, as just indicated would be about equal to the average in recent years This would not appear more than is reasonably needed to provide adequate working supplies for merchants and spinners. From a market standpoint the question is what is the price at which merchants and spinners will carry over such an amount into the season.

SUPPLY AND DISTRIBUTION OF AMERICAN COTTON IN THE WORLD

Running Bales, Counting Round as Half Bales. Linters not Included

Supply:	*1921–1922**	*1922–1923*	*1923–1924*	*1924–1925*	*1925–1926*
Carry-over August 1	9,944,000	5,671,000	3,370,000	2,754,000	3,590,000
Production Inc'g city crop	8,215,000	10,087,000	10,310,000	13,978,000	15,650,000
Total	18,159,000	15,758,000	13,680,000	16,732,000	19,240,000
Distribution:					
Consumption	12,488,000	12,388,000	10,926,000	13,142,000	.....
Carry-over July 31	5,671,000	3,370,000	2,754,000	3,590,000	.....
Total	18,159,000	15,758,000	13,680,000	16,732,000	.....

SUPPLY AND DISTRIBUTION OF FOREIGN COTTON IN THE WORLD

Equivalent Bales of 478 Pounds, Net Weight

Supply:	*1921–1922*	*1922–1923*	*1923–1924*	*1924–1925*	*1925–1926*
Carry-over Aug. 1	4,744,000	4,323,000	3,577,000	3,224,000	3,518,000
Production	6,913,00	8,004,000	8,740,000	9,804,000	10,300,000
Total	11,657,000	12,327,000	12,317,000	13,028,000	13,818,000
Distribution:					
Consumption	7,334,000	8,750,000	9,093,000	9,510,000	.....
Carry-over July 31	4,323,000	3,577,000	3,224,000	3,518,000	.....
Total	11,657,000	12,327,000	12,317,000	13,028,000	.....

SUPPLY AND DISTRIBUTION OF ALL COTTON IN THE WORLD

American Cotton in Running Bales. Foreign Cotton in Equivalent Bales of 478 Pounds Net Weight. American Linters not Included

Supply:	*1921–1922*	*1922–1923*	*1923–1924*	*1924–1925*	*1925–1926*
Carry-over Aug. 1	14,688,000	9,994,000	6,947,000	5,978,000	7,108,000
Production	15,128,000	18,091,000	19,050,000	23,782,000	25,950,000
Total	29,816,000	28,085,000	25,997,000	29,760,000	33,058,000
Distribution:					
Consumption	19,822,000	21,138,000	20,019,000	22,652,000	.....
Carry-over July 31	9,994,000	6,947,000	5,978,000	7,108,000	.....
Total	29,816,000	28,085,000	25,997,000	29,760,000	.....

"Art in Industry": A New Idea, You Understand

Representing the Chronicle of an Intrepid Explorer Who Didn't Know Much—and Learned a Little

By Douglas G. Woolf

"ART *in Industry.*"

We wish we had been the inventor of that phrase or slogan or whatever you choose to call it.

It would be so easy to write a story about it! A new idea: Mix Greenwich Village, (N. Y. C.), Gloucester, (Mass.), Mystic, (Conn.), Woodstock, (N. Y.) and other "highbrow" colonies with Lowell, (Mass.), Lawrence, (Mass.), Paterson, (N. J.), Charlotte, (N. C.) and other sordid commercial towns—and see what happens!

Unfortunately, we were born too late. By the time we had started to toddle around, better men than I am, Gungha Din, had relieved themselves of lengthy manuscripts, at space rates, on this potent subject of Art in Industry. Periodically the topic, appropriately capitalized, appears at the top of erudite articles purporting to "discover" this new influence in American industry.

So what is there left for us to write about?

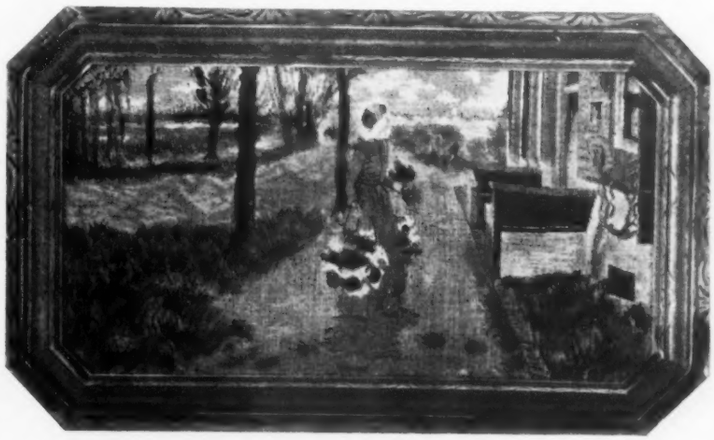
We don't know.

Except

Except that there isn't an awful lot of Art in Industry; that, in recent years, there has been a mathematically decreasing amount of Art in Industry; that there stands a good chance of Art passing out of Industry entirely in the future: and that, notwithstanding, there are certain forces at work which may put Art back into Industry.

All of which is decidedly academic. Possibly puerile.

Let's see: It was about, say, five or six years ago that we first called on Richard F. Bach, Associate in Industrial Art at the Metropolitan Museum of Art, New York. That's long enough ago for us to forget why we called. But we did.



Novel Use of Tapestry by La France Art Co.

We're not so very old now. We were younger then. Consequently we were enthused.

This Is That

You see, it was in the late afternoon and the rays of the setting sun imparted new color combinations to the iridescent glass of Ancient Egypt. And Mr. Bach told us that those colors were produced by decomposition! And that the chemical secret of that age-old decomposition was the basis of the Tiffany glass of today.

Aha, we cried. Art in Industry!

And later, we passed some very antiquated and very beautiful vases or receptacles or what-nots. And Mr. Bach informed us that the shapes of these whosis had been copied by soap-dish manufacturers of 1920 or thereabouts.

More Art in Industry, we enthused!

Not to mention the "period" furniture which we learned was used to illustrate publicity matter for a certain kind of underwear—to prove that people of refined tastes, living in homes where such chairs rested, wore this particular kind of underwear.

Well, that certainly was Art in Industry, wasn't it? At least, it was Art in Advertising—and Advertising is the life-blood of Industry—take it from One Who knows!

Howsomever, we were (and are) paid by a textile publication (modestly unmentioned here) and we were (and are) forced to find a textile application to the Tiffany glass and the soap-dishes and the furniture.

Coming to Textiles

It was explained to us (via Mr. Bach) that a certain number of textile firms were utilizing the resources of the Museum and that an infinite number more could, if they chose, find inspiration and help from the Art of the Ages as reflected at the Metropolitan and other fortresses of culture.

And then we had an inspiration. Why copy the Art of 1500 B. C. or 12 A. D.? Why not develop a truly AMERICAN school?

A brand new idea, you understand.

So we looked around at our Yankee (with apologies to our southern friends, for in this case Yankee means American) Art in Industry.

As a background, we had an experience of some 12 years ago in Persia. We bought some really good Oriental rugs when we were there (you may see them at our home if you send in your application on your firm's letter-head). And of course we wandered into the bazaars, where we found a miscellany of Manchester calicoes, Fall River prints and other products of the modern Art in Industry.

That didn't help us much.

As a further background, however, we recalled an interesting interview with a fine gentleman who was interested in hand-loomed cottons from Tryon, N. C. And another interview with a lady who told us about hand-loomed woolens from Biltmore, N. C. And still another interview with someone who revealed the Art in Industry developed at Harrison, N. Y.

And miscellaneous experiences at various Arts and Crafts Shops where the lady of the house and we had stopped for luncheon, en route, and had spent the price of an article, such as this one, on some manifestation of Art in Industry.

The Proverbial Monkey Wrench

Unfortunately, just at that time, our mathematical mind started to work. We balanced the clients of these Arts and Crafts Shops, scattered from Maine to Florida and westward to Seattle and Los Angeles against the hundred-odd million people who, the Census Bureau assures us, compose our polyglot population.

That's not Art in Industry, we affirmed. That's not Art en Masse; it's Art en Classe—or something like that.

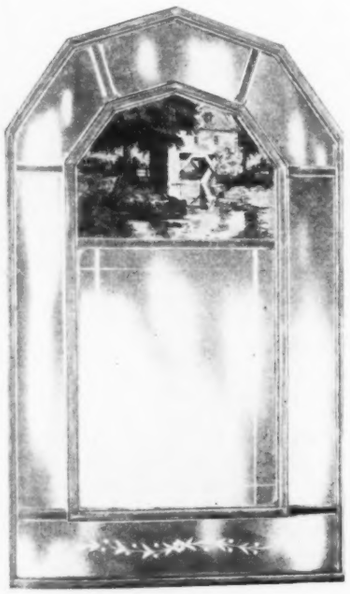
Another original idea, you understand.

Which brings us down to 1926.

How much more Art is there in Industry today than there was in those Dark Ages, some five or six years ago, when we first "discovered" the subject.

Well, we talked with a great many people about it. A stenographic report of all these conversations would fill several Annual Issues of this size—and they *are* getting bigger (and better) every year, aren't they?

But we can't quote them all. The publishers won't permit it. So we've picked out one which we regard as decidedly pertinent.



A Mirror-Tapestry Combination Developed by La France Art Co.

The LaFrance Textile Industries

HAVE you ever been in Frankford, Pa?

There it was that we "discovered" the La France Textile Industries.

Another original idea, you understand.

Look 'Em Over

This company maintains the La France Art Institute—a *free* school which is now in its fourth year and which is giving *free* (and excellent) art instruction to 200 students, none of whom is bound in any way to contribute an iota of his (or her) results to the La France Textile Industries? The president of the company is a man who is an artist by avocation, an engineer by profession, a furniture manufacturer by experience and a textile executive, today, by choice.

What's the answer?

What We Do Know

None, that we know of, except that this particular company started some eight or nine years ago with very little capital; did a business of some $3,000,000 last year; expects to do a business of some $5,000,000 to $6,000,000 this year and some $10,000,000 in 1927; has a plant in Canada and an additional plant in Frankford called the Velseal Plush Co., which has just been doubled in capacity and which, in 1927, should contribute some $4,000,000 to the $10,000,000 mentioned above; has a subsidiary, the La

France Art Co., which makes some $250,000 worth (annually) of "art squares" complete in frames or mirrors; has done a cretonne converting business of some staggering sum; has certainly netted at least a million dollars *after* art schools, advertising and all other miscellaneous expenses have been deducted and forgotten, and has done this by reinvesting profits—and not by bringing in outside capital.

What we *do* know is that the tapestries of the La France Textile Co., one of the subsidiaries of the La France Textile Industries, were, taken by and large, as artistic and beautiful a line as we have ever seen; that the "art squares" represented the realization of depth, perspective, proportion and color such as usually are found only in oil paintings; that the company had made a Jacquard loom do *new* things just as some of our most famous violinists have accomplished with that instrument; *and* that they have made money!

So that's that.

Mirror Flanked by Tapestries, Made by La France Art Co.

L'ENVOI

We don't know, of course,—and you don't know—and Bernard Davis, president of the La France Textile Industries, doesn't know—just how much of Art Industry is in a position to absorb today, anyway.

And all the time, you understand, Mr. Davis and you and I must keep in mind the limitations of automatic machinery; the limitations of price considerations; the limitations of quantity production (an established American axiom); the limitations of *mass* artistic appreciation—and a number of other limitations which we've forgotten for the moment.

It's a continual compromise, don't you know? You *do* know, don't you? You're doing it every day yourself, aren't you? Lots of things are fine, theoretically, but they don't ring the bell commercially or financially, or materially—or whatever you choose to call it.

But Frankford may mean something artistically or aesthetically, or whatever you choose to call it.

Then again, it may not.

That's what our raw cotton friends call a "hedge."

But, at any rate, there it was that we re-discovered Art in Industry.

A new idea, you understand.

Carolinas Hopeful for 1926

Look Forward With Optimism to New Period—Continued Diversification

DURHAM, N. C.

TEXTILE manufacturers of North and South Carolina look forward to the new year with considerable optimism, and reports indicate that the Georgia mill owners and those farther South feel the same way about the situation and the prospects.

Business with the mills was good during the fall and in so far as the power situation would permit there was regular and continuous operation. Demand has been good and there has been a better margin of profit than for several years. Another favorable condition from the standpoint of the mills is that they are not starting the year with overloaded warehouses. Their own curtailment policy of the last year or two, coupled with the drastic curtailment of power by the Southern Power Co., which furnishes operating power to a large percentage of the mills, and good demand, have prevented the building up of stocks. Merchants, too, are not supplied with stocks. The hand-to-mouth policy of buying still prevails to a great extent with the retailers, and while jobbers try to be in position to fill instant orders of the retailers, it is a safe bet that there are no big stocks of manufactured goods anywhere.

Curtailment, of course, has cut into the profits of the manufacturer during the past year, but it has left them in the best strategical position possible and they are able to carry on now without being hampered by built up stocks and unwanted goods.

Position of Farmer

Another reason for optimism among the manufacturers is that the farmers of the South are in good condition, perhaps as a whole in better shape than they have been at any time since the boom days of high prices.

While cotton prices are not and have not been such as to make them rich, the return on the investment is fair when the large crop is taken into consideration. The tobacco crop is large and profitable. Other crops have been good. So the farmer is spending money. He has paid his current debts, paid or reduced his notes and mortgages and still has money to spend on necessities and luxuries and to finance his spring work, and, so far as this section is concerned at any rate, good times for the farmer mean good business for all.

Retail demand has been good and this constitutes another reason why the manufacturers feel hopeful. The merchants are doing good business, and since they too have been following the hand-to-mouth policy, they are not loaded with goods, but on the contrary, are constantly in the market for new goods.

General Conditions Good

Conditions generally are good. Building activity continues at a high maximum and public construction and private building afford work for all. Banks report increases in deposits and balances, and while taxes continue high, the people, of North Carolina at least, feel that they are getting the worth of their money in the business-like conduct of Government and public improvements.

All these things, and conditions in the nation at large, augur prosperity for the South this year and southern mill men are prepared to take advantage of these conditions.

Diversification

Regarding diversification, a number of southern mills have changed from old staple and miscellaneous products for which the sale had become slow, to newer designs and weaves. How many mills have done this it is impossible to say but certainly there is considerable movement in this direction. New mills also are being equipped with machinery for making novelty weaves and fancy patterns and rayon mixtures.

Of course the large mills on staple products are largely holding on to their old lines. They have an established trade and will always have a demand for their goods. The specialty mills, too, bed linens, towels and the like have no reason for change but on the other hand, have all the orders they can fill. As an indication of the success of this sort of business, just the other day it was announced that the largest towel mill in this section of the country, probbaly the largest in the country, was planning large expansion of its equipment.

The smaller hosiery mills, manufacturing only plain cotton hosiery, probably have felt the lack of demand more keenly than any other class of mills, and as a result there is probably a greater percentage of these mills changing product than any other type of mill. Mercerized, mixed rayon and cotton and silk and cotton and all silk are largely taking the place of the plain cottons in these mills. In the larger mills where all types of hosiery have been manufactured for many years the output of plain cottons is still maintained.

Individual Views

Regarding changes of types and the demand for novelty goods, some views of representative leaders of the industry in this section, furnish a good insight into the situation.

S. F. Patterson, of Roanoke Rapids, president of the North Carolina Cotton Manufacturers' Association, and treasurer and manager of the Roanoke Mills Co. says:

"Novelties and especially those in which rayon has been used to a more or less extent, have encroached on the gingham market. But I expect to see ginghams worn again in large quantities before a great while.

"I think that North and South Carolina have now thoroughly demonstrated their ability to make the so-called fancies, where real art is required in the manufacture of such, just as well as New England or any other section."

C. A. Williams, wholesale dry goods jobber, Charlotte, N. C., says: "I think the textile industry of the State has made wonderful strides in the last few years. They have changed a number of mills from staple lines to novelties. Number of mills are beginning to make novelties and fancy rayon goods.

"We find that the staple goods are selling, and we believe they always will. They have not been as active as they once were, but there is nothing going to take the place of the staple goods, such as ginghams in the plain shades and staple patterns, also goods like "Ladlassie" cloth and staple stripes and checks in outings and solid colors.

"I would regret to see all the mills in this section stop making staples and go to novelties because if they did this the market on novelties would be just as bad as it is on the staple lines.

"The mills should have some kind of an organization and follow out some program of diversification, that is, all of the mills should not go on the novelties, but the organization should try to get certain mills to make one line of goods and other mills another line, and it should see that too many mills do not get on any one line.

"We are selling quite a lot of rayon novelties and we believe they will be good, provided the mills make them up to standard and make good styles. If they begin to cheapen rayon, that is, make inferior quality and all one style, the mills will find themselves in worse shape than they did in the gingham proposition, I believe. If they will keep rayon up to standard, watch the styles and make the latest things, they will succeed and make money."

Wool Standardization and Statistics

Government Authority Found Lively Interest in Both Subjects Among European Manufacturers and Merchants—International Wool Standards May Follow Correlation of United States and British Grades—Possible Trend Toward Public Marketing of Wool

By George T. Willingmyre

Specialist in Wool Marketing and Standardization, Bureau of Agricultural Economics, U. S. Department of Agriculture

THE conferences recently held in England between British Wool authorities and the representatives of the Government and the associated wool manufacturers of the United States were of great significance to the wool industry of the world. Through them the views on standardization of qualities for wool and tops were unified and the way paved for the reconciliation of any differences of opinion that in the future may arise between the wool industry in Great Britain and the United States. This alone is acclaimed by leaders of the industry as a step toward closer accord and understanding throughout the wool interests of the world.

No one can tell what may develop as a result of this general agreement on grades between the two countries. A very prominent textile authority in Europe prophesies that it is the forerunner of a world wool commission to consider education and technical problems of wool and textiles that may arise from time to time, and that benefit would come from such an organization cannot be disputed. Many world wool problems today could be satisfactorily disposed of if such an organization existed. Problems of production, transportation, handling, preparation and marketing are a few of the main issues, he said. In the field of production, improper breeding methods resulting in unevenness of fleece, the use of unsuitable material for marking sheep, the presence of gray fibres in wool, he thought, were all worthy subjects for consideration. Recommendations coming from a world body would have much effect and should receive more attention than if coming from private sources or lesser groups of individuals.

Need of Facts

The world's wool market, most of us will agree, is exceedingly sensitive and responsive. Its fluctuations from day to day may at any time deviate from normal on account of its susceptibility to external factors. One of the potent causes for some of the marked reactions that have occurred in the past has been the lack of complete and authentic information on supplies and other attributes of the world situation. Some information has been available, however, and when used in support of views and forecasts from acceptable sources, has not been without influence in swaying the market one way or another. Notable examples of the accentuated ebb and flow of wool values, leaving many members of the wool industry with unpleasant recollections, are not lacking even within comparatively recent months.

Supply and demand should be the controlling factors in the world's wool market; the two operating concurrently to influence prices and price trends. One has but to recall recent wool history, however, to see that at times supply may popularly be accorded greater weight than demand, although the experiences of 1920 might disprove the wisdom of that course. The significance of demand cannot be overlooked. Of course differences of opinion in regard to supply, demand and values have their influence in the markets of the world, and the activities in some sections are causes for markets in other sections to respond in sympathy. When feverish activity in the world's market gets its stimulus from conjecture, however, it may be well to remember that there has seldom if ever been an actual wool famine, but that there has always been enough wool to meet manufacturing requirements.

Steadying Influence of London

The stabilizing influences in the world's market at the present time are the London wool auctions and the auctions in the Colonial market. They tend to check or confirm individual opinions of trends and values. They are the points or the stations where the wool trade gets its bearings. Between sales the market may follow an erratic course and even run wild, as the cumulative effect of individual differences are felt, but all eyes are turned toward the sales as they are approached since they are looked upon as the means of bringing ideas and values back into line. Thus the sales, and especially those held at London, are the balance wheel in the world's wool market, and the gauge for the intrinsic value of wool to commerce and industry. At these sales it is not only individual competing against individual, but the trade of one country competing against the trade of another country. If it were not for the London sales the world's wool market would likely be continually in a much more unsettled state than at present.

Advantage of Public Trading

Stabilization of market and price for a commodity is a fanciful and beautiful idea. Very often the term is misapplied or misinterpreted. What should really be understood is steadiness. A stabilized or steady market is just the opposite of a fickle market. To stabilize wool market conditions as near as humanly possible it may be necessary to extend the public marketing of wool either by auction or by some other method. Some of the old methods may have to be sacrificed to accomplish this. Sales of wool by private treaty will likely always be made, but the tendency to reduce this method of selling may be observed. On a public market where free and open trading is permitted buyers and sellers are not placed at any disadvantage. Inspection of the commodity can be allowed and bids accepted in competition with others. The financing of the sale may then be satisfactorily arranged as this constitutes a mere detail.

It is generally acknowledged that one of the greatest evils in our present system of distribution is the waste through the various channels of trade, and the high costs entailed before goods reach the consumer. With the adoption of more efficient methods these distribution costs can very likely be reduced. In giving consideration to the reduction of distribution costs, in the wool industry in the United States, the open market method may well be weighed against the present methods of marketing.

One of the greatest aids to the public marketing of a commodity is, first of all, the standardization of the commodity. Some day it may be possible to offer wool for sale by description. However, as wool lends itself admirably to warehousing and sampling for inspection, we need not concern ourselves with sales by description at this time. Standardization is only one of the means of bringing about a common understanding of trade terms.

International Standards Probable

Trading in wool today are business men of the highest type, comparable in integrity and honesty with those to be found in any other industry in the world. Thoughtful men see in the standardization movement the lessening of friction and confusion in business and the means of a better understanding between all contracting parties. What is said of standardization in general may likewise be applied to wool, and the ultimate establishment and adoption of international standards for this commodity for use in the wool producing and wool consuming countries of the world is well within the range of possibility.

Wool standardization and world wool statistics are of great interest to the trade in England and on the Continent. It is of more than passing interest that the wool trade in the countries of the continent of Europe are also very much interested in standardization and have kept informed of the progress that is being made between the United States and England. While conferences in France, Germany and Italy were for the purpose of developing a more complete statistical service for the world the trade in these countries manifested a surprising interest in standardization and many members expressed the hope that it would become international in scope.

(*Continued on page 295*)

Those domestic wool merchants and manufacturers who regard somewhat lightly the correlation of United States and British wool grades and terms effected through the cooperative efforts of the Department of Agriculture, represented by Mr. Willingmyre, domestic manufacturers' organization represented by Marland W. Hobbs, and British trade organizations, may find food for broader thought as to its possibilities in the accompanying review by Mr. Willingmyre of European views of its significance. Following the conferences in England Mr. Willingmyre spent several months in study of wool trade problems with representatives of the trade in various European countries, and this is an abstract of his detailed official report to be published later.

George T. Willingmyre

COTTON INDEX NUMBERS

Date	Cotton	Yarns	Gray Goods	Colored Goods	Aver. for Cloths	Group Aver. age
1914						
July 31	100	100	100	100	100	100
1919						
January	255	278	280	295	288	279
April	228	221	228	238	233	226
July	283	321	372	292	330	321
October	278	324	387	320	351	337
1920						
January	314	448	464	411	435	427
April	339	531	498	416	455	460
July	327	425	405	423	414	407
October	190	229	248	362	308	282
1921						
January	131	142	176	203	190	175
April	97½	116	138	182	161	147
July	97½	112	133	176	155	141
October	160	179	198	208	203	193
1922						
January	146	168	174	206	191	182
April	144	156	168	209	189	178
July	178	182	190	200	195	189
October	177	192	206	201	203	197
1923						
January	225	225	220	230	225	225
April	231	239	224	242	233	234
July	217	197	190	236	212	211
October	237	222	212	225	219	219
1924						
January	278	241	228	243	236	239
April	220	211	192	194	193	198
July	270	198	186	191	189	196
October	195	196	187	189	188	199
1925						
January	192	197	195	173	184	187
April	196	194	193	180	187	188
July	197	183	185	176	181	182
October	174	189	193	178	186	186
1926						
January	167	175	177	162	170	171

THE JANUARY INDEX NUMBERS

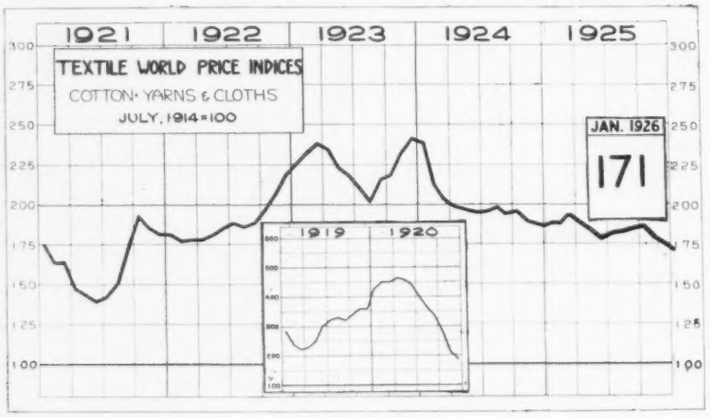
WITH the possible exception of woolen and worsted cloths, which are due for a further moderate decline with the opening of the heavyweight season, all index numbers of cotton and wool manufactures are lower in relation to raw material prices than at any similar period since 1922.

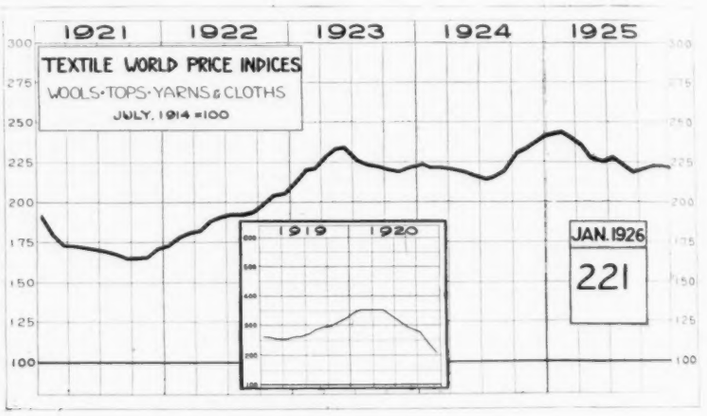
During January cotton yarn and grey goods prices fluctuated within narrow limits and in sympathy with the raw material, giving every evidence of stabilization; the colored goods index suffered a gross decline of 7 points. For the closing week of January cotton index numbers were as follows: Cotton 167; yarns, 174; grey goods, 177; colored goods, 160; group average, 170.

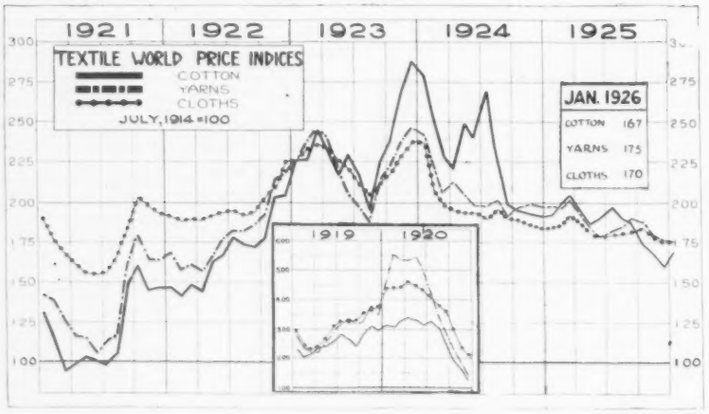
Tops and yarns showed greater weakness than wool during January and prices of new heavyweight cloths may be expected to reflect this change. For the closing week of the month the index numbers were as follows: Wool, 214; tops, 210; yarns, 209; group average, 220.

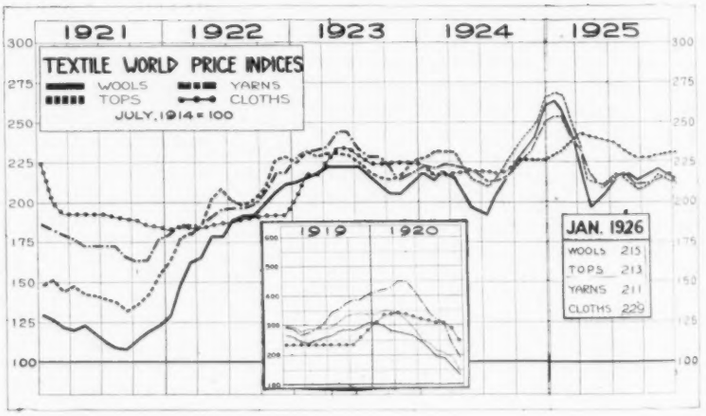
WOOL INDEX NUMBERS

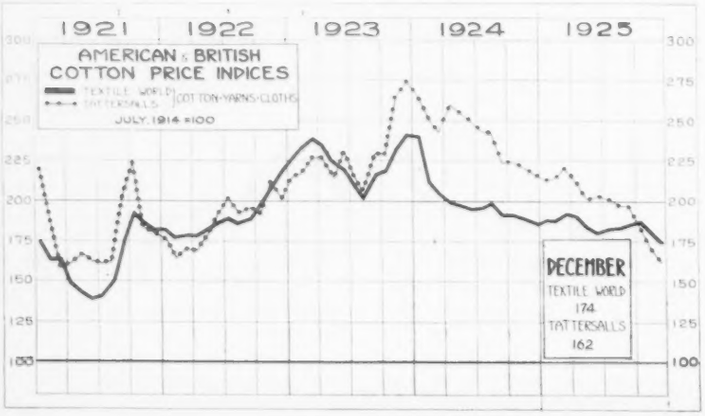
Date	Wool	Tops	Yarns	Cloth	Group Av'ge
1914					
July 31	100	100	100	100	100
1919					
January	272	296	290	237	273
April	242	282	273	237	258
July	269	290	258	237	272
October	286	338	384	240	294
1920					
January	304	335	412	310	350
April	276	334	448	331	372
July	241	258	384	320	317
October	189	213	302	304	276
1921					
January	129	148	186	224	191
April	120	148	177	192	173
July	112	139	172	192	170
October	114	135	162	188	165
1922					
January	128	163	179	182	173
April	165	185	185	184	182
July	189	202	196	188	194
October	199	209	208	191	199
1923					
January	212	225	227	203	213
April	222	230	234	225	228
July	222	223	233	228	227
October	205	213	222	224	220
1924					
January	217	227	221	223	222
April	216	230	223	219	221
July	191	209	212	219	213
October	227	237	224	226	228
1925					
January	264	268	253	228	244
April	219	234	230	241	233
July	216	217	216	239	227
October	216	212	212	227	220
1926					
January	215	213	211	229	221

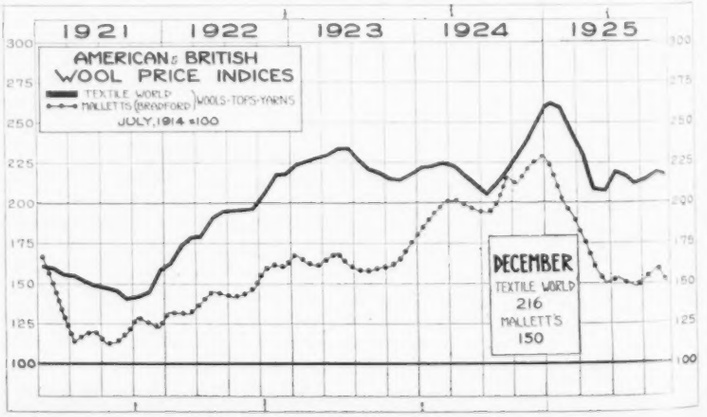












Improved Outlook for Cotton Goods

Broader Distribution Likely at Lower Raw Material Level—Much Expected from Increasing Interest in Improved Merchandising Methods—The Rayon Rage and the Popularity of Novelties in General —Southern Drouth Gives Lesson in the Value of Curtailment

MORE than the usual amount of optimism has greeted the coming of 1926 in the cotton goods trade. This does not imply that the industry looks forward to a year which will be entirely free of difficulties and altogether rosy, but that from a number of important, basic angles the stage appears well set for appreciable improvement in the business as a whole.

Last year was not a red-letter one for most mills, but for the industry as a whole it was decidedly better than its predecessor. Periods of healthy business activity were followed closely by periods of almost complete stagnation. An active first quarter and a fairly active last quarter were sandwiched in between quarter-years which yielded indifferent results for a majority of manufacturers.

Briefly summed up, last year was one which, while spotty in character, made at least a fair showing in the profit columns of mills whose profits were nil or nearly nil in 1924; considerable progress was made in the right direction along important lines; the fundamental problems of the business appeared more clearly on the surface and were more generally recognized; substantial progress was made in clear thinking and in the cooperative work which some students believe to be the best solution so far offered for the ills of certain branches of the industry.

A Little Prophecy

Prophecy is not popular with those who know even a little something about the character of the cotton goods business. But a conservative outline of the immediate future runs like this:

Relatively cheap cotton has made possible relatively low prices for goods, and this, as every economist will tell you, should insure larger volume, wider distribution; the weight of the large cotton crop last year hung heavily on the minds of all classes of buyers throughout the fall and early part of the winter, and in all classes of finished goods they have held their purchases down to bed-rock requirements—which means that there should be a sizable buying movement during the first quarter of the year; stocks, with few exceptions, are at a very low point.

The industry as a whole has achieved a better adjustment of its production, in theory, at any rate. Many mills have intelligently met the demand for novelty in classes of merchandise which are not usually considered novelties. Production has been switched around a great deal. It is true that mills have frequently been doing little more than groping in the dark, but that has seemed about the best they could do under the circumstances.

No one can predict the course of fashion, but if the spring wash goods season runs true to the form indicated for it the industry is in excellent condition to take care of the expected demand.

Important problems there are a plenty still to be solved; the pessimist can find all kinds of material at his finger tips ready for instant use. To the impartial observer it appears as if the worst that can be predicted for 1926 is a continuance of the period of readjustment, and that the best that can be said for it is that the time may be ripe for the cotton goods industry to share justly in the wave of unprecedented prosperity which is sweeping over the country.

The Rayon Rage

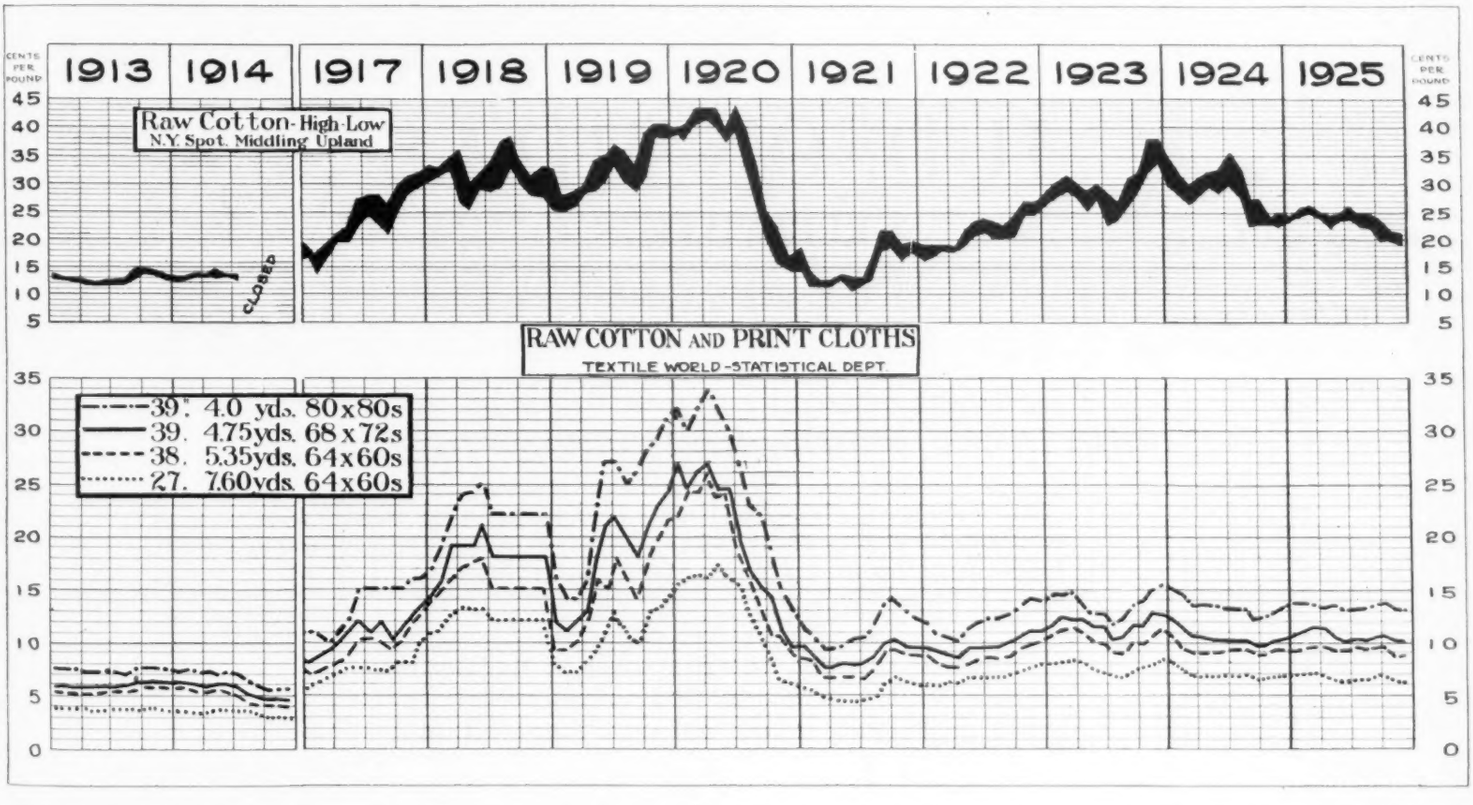
Unquestionably the outstanding feature of last year and the promised headliner of 1926 is the enormous increase in the use of rayon by cotton goods mills. A fair index of the place that rayon has come to occupy in the industry is given by the production figures of the largest manufacturer of rayon yarn in the country, which show that the cotton goods industry in 1926 consumed 26% of their entire production, as compared with 15% in 1924 and 11% in 1923.

The rayon vogue has been little short of revolutionary. Practically every mill in the country which is at all qualified to do so has experimented with the comparatively new fibre. Rayon has worked its way into a wide variety of merchandise. Used for decorative purposes it has added new life to many fabrics which were in danger of going to a lingering death. The controversy still wages as to whether rayon has been a good or a bad thing for the industry, but those who still cling to the latter view find thmeselves disputed at every turn by concrete evidences that they are wrong.

In dress goods, draperies, bedspreads, wash goods, shirtings, etc. it is not too much to say that rayon has provided the primary sales stimulus in a big majority of cases. That it will continue to do so seems almost inescapable.

The Gold Rush

Evils have accompanied the rayon vogue, as they always go hand in hand with any new development. To many mills rayon appeared as a mysterious something which would overnight cure all their troubles. Mills



JUDSON MILLS

GREENVILLE, S. C.

B. E. GEER, President

BROWN MAHON
Vice-President and Assistant Treasurer

W. C. BOBO
General Manager

"Faith in the South and Courage to Back it"

This slogan of the Southern Railway System applies to those men who years ago planned and built the Judson Mills in Greenville, South Carolina.

It was the pioneer, the first mill in the South to spin and weave the fine yarns which for years had been made only in England and New England.

Today, Judson stands preeminent in this country in the manufacture of fine yarn fancies and cotton and silk novelty fabrics.

JUDSON DIVISION
Hunter Manufacturing & Commission Company

60 Worth Street - NEW YORK

F. W. JEFFERSON, Vice-President F. R. BROWN, Sales Manager S. C. FRIEZE, Assistant Sales Manager

which had no experience at all with novelty production jumped into the game, expecting that somehow or other the mere employment of rayon in any old kind of a fabric would sell that fabric for them.

Styling has in instances been sad to contemplate. Every effort has been made in cases to cut costs to the bone and let quality take care of itself. Production of rayon mixtures has been so rapidly increased that some prophets of gloom feel that the rayon-mixture field is already as much over-produced as are brown sheetings.

A little practical experience, however, quickly demonstrates that rayon processing has a technique of its own which cannot be mastered in a few weeks or a few months. Manufacturers have discovered that rayon-mixtures are not the bonanza proposition they may have been considered.

Meanwhile the market for well made rayon materials has been growing and in some classes of merchandise they seem permanently established as a staple. In dress goods and wash goods generally the fate of rayon remains primarily in the hands of style, and no one even dares suggest what that fickle female will do.

At the moment, however, there is no indication of any swing away from the bright, lustrous effects which are made to order for rayon. It is a notable fact that while the use of rayon has been expanding rapidly, consumption of silk goods has also been increasing apace. It may be conservatively stated, without any intention of punning, that the future of rayon in the cotton goods field appears to be very bright.

Quality

The subject of quality in rayon mixtures is worthy of a short paragraph here. Reference has been made to the fact that many mills have gone into the use of rayon almost entirely from the price angle. A flood of cheap goods is now on the market which will not contribute in the slightest to the permanency of the vogue. The instances have been too frequent in which mills have taken regular gingham constructions, put a few threads of rayon into them, and expected them to sell like hotcakes.

This subject has been treated at length in these columns, and it needs no further expansion here. Far-sighted manufacturers recognize the necessity of maintaining quality standards in rayon-mixtures if the merchandise as a class is not to receive a black eye. Mills have in their own hands the ability to extend the rayon vogue indefinitely—barring a sudden change in style—and they are realizing it more and more by means of capable styling and proper care in processing.

Forced Curtailment

If all the arguments about the advisability of restricting production to consumption during the last few years were laid end to end they would reach many times around the Earth, in the popular metaphor. The drouth in the Carolinas and northern Georgia last summer furnished an object lesson in this matter which was worth much more than all the theorizing that has ever been done on the subject.

Water shortage caused a restriction of electric power furnished to mills in the sections affected and necessitated curtailment amounting to as much as three or four days a week for a considerable time. Mills had no choice in the matter; it was not a question of manufacturing policy or merchandising policy or anything else of the kind.

The results were quickly apparent. Buyers realized the situation and the wiser ones hastened to cover themselves for nearby deliveries. Premiums were freely paid for spot print cloths all through the fall, and the market remained relatively strong notwithstanding the weakness in cotton. Manufacturing margins widened to something like a normal basis. Print cloths, particularly certain of the active constructions, were profitable numbers.

A good part of the ills of the industry during recent years may be laid to the door of the potential over-production which hangs over the market like a shroud. It is difficult to convince any individual manufacturer that his plant should be the one to curtail to bring about a better balance between supply and demand.

With the demonstration given them last year of what proper curtailment of production means to the industry as a whole mills should think twice before they insist on running full tilt day and night until they have flooded the market on themselves. Predictions of a fair to good year in 1926 for print cloths as a class are based upon the assumption that mills have learned their lesson in this matter of production.

In this connection special mention must be made of the fact that 1925 marked the first organized attempt on a sizable scale in the industry to collect statistics on production, stocks, etc. Southern mills selling through commission house members of the Cotton Textile Merchants Association of New York last summer started furnishing figures of this character, through their selling houses, to the association. These figures are collated and the resultant totals reported back to all selling houses and mills reporting.

Figures of this character are now being compiled on print cloths, sheetings, osnaburgs, drills, heavy-warp sateens, denims, ginghams, pajama checks, four-leaf clothing twills, pocketing twills, jeans, duck, drills, twills, sheetings and sateens over 40 in., and chambrays, cheviots and plaids.

The most enthusiastic advocates of the above system do not maintain that it is perfect, or anywhere near perfection. Few will dispute, however, that it is a step in the right direction. Human nature will always be human nature. No plan of operations of this kind will ever reach 100% perfection.

Commission house men who have participated in the present plan from the beginning feel that while it has its shortcomings it has on the whole been a beneficial thing from which worthwhile results have already been obtained. They hope for a steady expansion of the principle of cooperative statistical work, within proper limits.

Increased Exports

A good-sized increase in the quantity of cotton goods exported was shown in 1925 in comparison with 1924 shipments. Healthy increases were recorded on all classes of fabrics. Department of Commerce statistics show total exports of all kinds of cotton cloths for the calendar year 1925 to have been 543,313,888 sq. yds. valued at $85,011,312, which compares with 477,815,408 sq. yds. valued at $78,204,177, exported during the twelve months of 1924.

Classified details of the total quantity of cotton cloths shipped during the two years are given in the following table.

	1924		1925	
	Sq. Yds.	*Value*	*Sq. Yds.*	*Value*
Total cotton cloth.....	477,815,408	$78,204,177	543,313,888	$85,011,312
Duck	9,129,895	4,174,233	11,669,906	5,072,712
Other cotton cloths—				
Unbleached	110,921,404	13,942,931	129,467,643	15,087,789
Bleached	82,458,805	12,075,860	92,937,823	13,352,271
Printed	97,262,828	13,925,536	111,197,504	14,921,031
Piece dyed	93,955,175	18,082,158	107,344,997	20,320,460
Yarn or stock dyed.....	84,087,301	16,003,459	90,696,015	16,257,049
	Lbs.	*Value*	*Lbs.*	*Value*
Cotton yarn—				
Carded	7,929,056	3,524,019	13,506,064	5,708,404
Combed	5,744,453	3,899,948	8,385,746	6,187,796

An appreciable decline in cotton goods imports was registered during 1925. Department of Commerce figures show a total of 95,000,000 sq. yds., valued at $22,000,000, brought into this country last year, in comparison with 123,900,000 sq. yds., valued at $25,500,000 imported during the last ten months of 1924, the period for which figures on specified kinds of cotton cloths are available.

Unbleached broadcloths, poplins, madras, oxford, etc., constituted 56% of the total volume of imports during the 10 months period of 1924, and 57% of 1925.

Increasing Merchandising Interest

Trade sentiment now generally realizes that it is the merchandising end of the business which is most in need of improvement. Interest in this subject has thus far been largely academic, but it is becoming more practical all the time.

It is no exaggeration to say that numerous manufacturers are more open to new selling ideas now than ever before; the difficulty has been that even the best thought in the industry has been at considerable variance as to what will be the major lines of merchandising development in the future.

The year witnessed several notable converts to experimentation with national, or semi-national, advertising. The packaging idea, in specialties particularly, appears to be gaining ground, and it is the opinion of good students of selling that this merchandising kink is worthy of considerable further expansion. Interesting work is being done in the matter of extending the mill's converting of its own gray goods, and the theory that the fabric manufacturer is economically capable of not only finishing his own fabrics but making them up into certain types of ready-to-wear will undoubtedly receive a much better test during the next few years than it ever has before.

Raw Material

Last year furnished an excellent example of how far wrong the Government can be in its early estimates on the final yield of the cotton crop. Early estimates indicated a yield of less than 14,000,000 bales, while the total yield, it now appears, will be close to 16,000,000.

Vigorous protests have been made against the Government reports. Some advocate their entire elimination, others a modification of the system doing away with every-other-week estimates and substituting less

1925:

Enormous increase in use of rayon.
Broad swing toward novelties.
The lesson of the drouth.
Cooperation on production statistics started.
Better adjustment of production accomplished.
Increased exports; decline in imports.
A big year for prints.

1926:

Expanding interest in improved merchandising methods.
Another big print year.
A cotton basis making for broader distribution.
Sensible curtailment of production to consumption.
Better technique on novelties, especially rayon mixtures

Victor-Monaghan Company

"THE MILLS THAT USE HIGH GRADE COTTON IN THEIR GOODS"

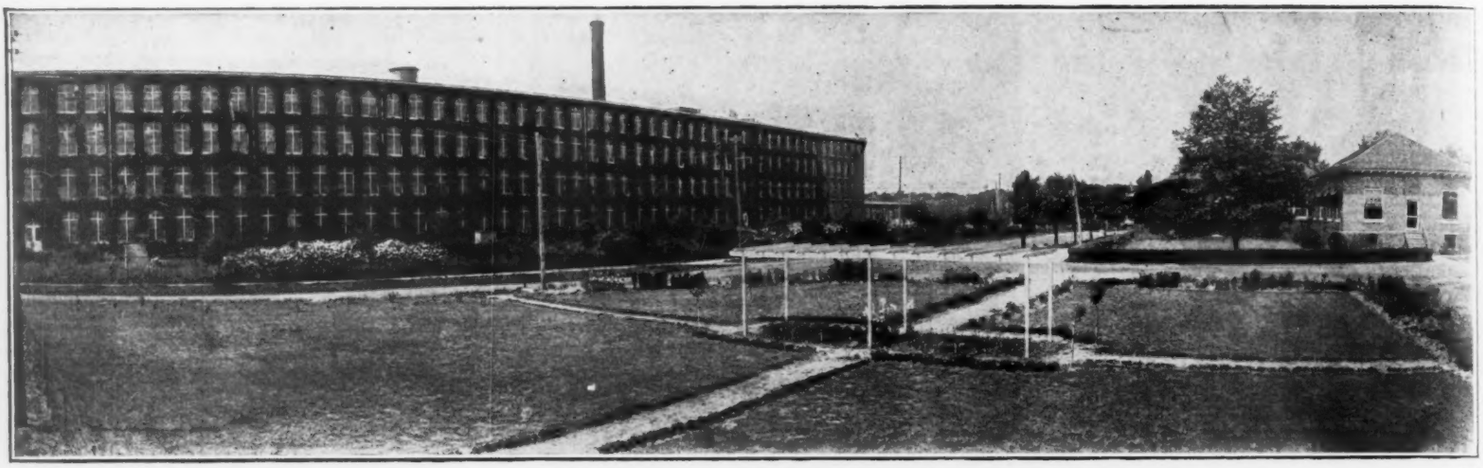
"More Than a Place to Work"

PRODUCTS:

CLOTH AND CHARACTER

EXECUTIVE OFFICES:

GREENVILLE, SOUTH CAROLINA



Monaghan Plant, Greenville, S. C., one of five modern mills owned by Victor-Monaghan Co.

Broad Cloths

(32 to 40 inches wide)

Of finest Quality from Carded Yarns, White or in Colored Stripes. Durable, Sturdy Fabrics for the Shirting and Dress Goods Trades.

Brassiere Cloth

Very Attractive Designs Woven from Carded Yarns and Artificial Silk.

Fancy Shirtings

(32 to 40 inches wide)

Fabrics for the Converters, in Dobby and Box Loom Patterns, with Colored Yarn and Artificial Silk Stripes and Checks.

Dobby Shirtings

(26 to 28 inches wide)

Specially adapted to the peculiar needs of Export Markets.

Monaghan Crinkled Quilts

Are Widely Used by the Embroidery Trade. These Quilts are of Excellent Quality and Offered to the Trade in White Cotton, Cotton and Artificial Silk, in a Variety of Colors, with Plain or Scalloped Borders. Shipped in Cases, Rolls or Individual Cardboard Boxes.

Bedford Cords and Poplins

For Bleaching, Printing and Dyeing.

Combed and Carded Yarns

10s to 40s Carded

30s to 60s Combed

These Yarns are the Equal of Any on the Market.

Pinecrest Pillow Tubing

Product of Victor and Greer Plants

Although First Offered to the Trade Only a Few Years Ago, Pinecrest Pillow Tubing is Firmly Established, of Moderate Price, Good Quality, Evenly Woven. It is Offered in Standard Widths in Both Muslin and Linen Finish.

Wide Dress Fabric

Special Rayon and Cotton Mixtures, 54 inches wide, Yarn Dyed, in Variety of Patterns and Newest Colors Are Now Offered to the Trade.

Wide Sheeting and Sateens

Made Specially for Shade Cloths, Automobile Tops and the Upholstery Trade.

Pajama Checks

Of Excellent Quality for Underwear.

EQUIPMENT:

182,900 Spindles

4,733 Looms

PLANTS:

Monaghan Plant
Greenville, S. C.

Greer Plant
Greer, S. C.

Apalache Plant
Arlington, S. C.

Victor Plant
Greer, S. C.

Walhalla Plant
Walhalla, S. C.

SELLING AGENTS

Ridley Watts & Co.

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N. Y. CITY

frequent early-season reports which will be confined to statements of actual acreage planted, weather conditions, etc., with no attempt to forecast the yield until toward the close of the season.

It should be unnecessary to point out that those who believe the present system is harmful should work for its modification, not its elimination. Eliminating the Government guesses will not remove from existence private reports containing yield estimates. With the elimination of the Government reports these private reports would increase in importance and would undoubtedly have just as much influence on the market as the Government figures now have. On the whole the Government reports are infinitely to be preferred to those made by any private agencies.

Much has been made of the poor character of the last crop, the large percentage of tinged and untenderable cotton which it contains. Bull propaganda already has started regarding the restriction of acreage which will take place this year through concerted efforts of planters and the assumption that higher prices must come.

It is not improbable that there will be a strengthening of cotton prices during the early part of this year as the result of this propaganda, but good students insist that with normal conditions a 20c average for middlings will hardly be exceeded by this year's crop, and that as a general statement the course of raw material prices will be downward.

The Novelty Trend

The novelty trend was accentuated during 1925 and will unquestionably be carried still further this year. Rayon has played a big part in this movement, but progress has also been evident in fabrics made entirely of cotton. The character of styling has been improved in all branches of the industry, and further progress in this movement is certain.

Sluggish markets for time-honored staple fabrics have shaken many design departments out of their complacent lethargy, and this, on the whole, is the feature of the business which holds out most promise for the future.

Ginghams

Under the circumstances it was natural that low-end colored goods such as chambrays, denims, tickings, etc. did not enjoy a good year in 1925. They face 1926 with a considerably improved statistical position and a production which is much better adjusted to demand.

Gingham production has been cut down radically, of course. Gingham mills have made every effort to get their machinery on merchandise more in demand, the largest manufacturer in the country going in for rayon-mixtures to the extent of experimenting with the production of its own rayon yarn.

Old time merchants insist that a fabric with the all-around value of the gingham cannot stay permanently "out of style." Some of them profess to see a swing back to staple ginghams now in the making. It should be acknowledged, however, that there will probably never again be seen in this country a gingham market of the broad proportions of those of a few years ago; capable manufacturers have long since accepted this fact and made their plans accordingly.

Bleached Goods—Broadcloths

Brown sheetings continue to suffer from an excess production which is being righted only gradually. The print cloth story of this year will be determined by the intelligence manufacturers display in limiting production.

Bleached goods continue to be dominated by merchandising policies which have as their basis the naming of extremely low prices. This situation is frequently referred to as a test of endurance between two very large interests. As a spectacle it is interesting, but hardly a pleasant one for the smaller factors who must make their profits, if any, on speculative gray goods purchases and not on the sale of their finished merchandise.

Broadcloths have been accepted as a staple. There is no longer any room for doubt that this construction is here to stay, and that its use will be spread over a great number of consuming trades. It is complained that the large number of mills which have gone into the broadcloth business, and the consequent severe competition, have taken all the profits out of the business, but the answer to this is obvious.

A Big Print Year

Nineteen hundred and twenty-five was a very large print year and all indications point to 1926 being a duplicate in this respect. The staple end of the business has been converted into a novelty or semi-novelty one, in which new patterns must be brought out constantly. Printing departments of finishing plants were taxed to capacity almost all of last year and their outlook for 1926 is equally promising.

Cotton and part-wool blankets continue to live up to their reputation as one of the best branches of the industry, although the sailing has not been entirely under clear skies. The excellent style brains brought to bear on this business have brought excellent results. Continued rapid expansion of the market for part-wool goods should be the outstanding feature during the next few years. Flannels are in somewhat irregular position, due largely to the novelty influence.

Draperies and bedspreads reflect to a large degree the influence of rayon. Their outlook for 1926 is conditional upon style developments and the ability of the market to absorb materially increased production.

The Outlook

From all present indications, rayon mixtures will dominate the wash goods and dress goods season this year. Rayon alpacas should be even more important in the scheme of things than they were in 1925. Prints of a wide variety, including broadcloths, chiffon voiles and crepes, should meet a big market. The color and pattern motifs which will dominate 1926 are still to be determined.

A considerable stir has been made by 54-in. dress goods and there has been and is much speculation as to their development. Intelligent opinion holds that 54-in. goods have a constantly expanding market ahead of them, but that there is no probability of their revolutionizing the business overnight or within a few years.

Shortly summarized, the big successes of the next few years in cotton goods will undoubtedly be built up around specialties, but the tone of the business as a whole should improve this year.

Lancashire Looks for Better Year

Trade Hopeful, Although English Cotton Industry in 1925 Experienced Another Year of Disappointment

By Frederick W. Tattersall

MANCHESTER, ENG.

A YEAR ago the outlook in the English cotton industry was considered brighter than at any time since the slump of 1920. This viewpoint was due to the increasing demand for yarn and piece goods during the last couple of months of 1924. As a result of the larger turnover, decidedly more machinery was working than for two or three years past, and there seemed to be no indication of buyers having satisfied their wants.

Early in 1925, however, trade began to slow down, and producers complained that they were losing ground again. Order lists were reported to be running down, and in the yarn section there was a tendency for stocks to increase at the mills. A dragging state of affairs occurred for three or four months. After a slight improvement, traders began to be affected in their operations by the advices relating to raw material supplies in the new season. A feeling of uncertainty arose as to the future level of values, and owing to bearish sentiment prevailing, there was a disposition to operate from hand to mouth. In the autumn there were two or three occasions when certain merchants took a view of things and purchased fairly freely, but these buying movements have not turned out well, and much nervousness still prevails as to whether the moment is ripe for a policy of enterprise.

An event of the year has been the marked fall in raw material prices, and rates for the American staple are now lower than for three and a half years back. A wonderful change has occurred in the general outlook for supplies of raw cotton. This development is of considerable importance, and should be the means of bringing about a revival in England for manufactured goods which are now cheaper than for several years back.

From the point of view of finance, last year was an anxious one. Numerous failures have been recorded, and quite a number of spinning companies have had to put forward reconstruction schemes to the shareholders. A notable event has been the difficulties of the Belgrave group of mills. The industry is still deeply committed to the banks, and it will probably be a long time before numerous concerns are in a position to balance their books on a favorable basis.

Cloth Business Irregular

During the last few years there has been a steady improvement in the exports of cotton piece goods from the United Kingdom to foreign markets, and this movement has been fairly well maintained during the past twelve months. To that extent, therefore, trade has been of an encouraging character, but in numerous departments it has been exceedingly difficult to secure remunerative prices from customers, and it may be said that England is still providing consumers with goods at rates which do not leave any margin of profit.

The depression is still most acute in common and coarse goods, and it is quite impossible to obtain orders of weight in "bread and butter" styles. On the other hand, makers of fancies and specialities have had a fairly busy year, and if all manufacturers were doing as well as these producers there would be very little to complain about. The fact of the matter is larger quantities of cotton goods are now being produced in the countries that for a long number of years have been supplied by England, and it is more evident than ever that in the future English spinners and manufacturers will have to depend to a large extent upon trade in fine fabrics.

There has again been a good deal of uneasiness with regard to finance. Quite a number of failures have taken place, and in some instances, the losses have been very serious. Early in the year there seemed to be less money stringency, and many merchant houses had the advantage of an increased amount of liquid capital. Latterly, however, things in that respect have become rather worse, and more cases have been reported of merchants being in difficulties, while manufacturers themselves have felt to a serious extent the tightness of money, and difficulties in securing prompt remittances.

Home Trade Continues Better

One of the bright spots of the year has been the home trade. Manufacturers who make goods for home consumption have probably had the best 12 months since the end of the European war in 1918. The excellent summer weather resulted in extensive clearances of stocks of light fancy

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materials. Supplies for quick delivery were much sought after, and most of the wholesale houses are in a stronger position than for some time back. A welcome improvement has also shown itself in the experience of retailers. Operations during the autumn were on a healthy scale and there is every indication of good clearances during the winter. The purchasing power of the public is still affected by the depression in many leading industries, but notwithstanding some adverse factors the general outlook in this department may be described as encouraging.

With regard to weaving production during the year, there has been a good deal of irregularity. It is estimated, however, that at the moment the output of cloth is about 85% of the full capacity of the machinery. At the beginning of 1925 the production was estimated at about 90% of the full. Most of the idle looms are stopped for want of orders, but some cases can be mentioned of machinery being at a standstill because of the shortage of workpeople. There has not been any attempt on the part of weaving employers to work short time on an organized scale. It has always been found most difficult to organize manufacturers for this purpose as there is such a wide variety in the cloths produced, and, of course, goods are sold on definite delivery terms.

The following is a comparative table of cloth shipments from the United Kingdom for the pre-European War year of 1913 and the past six years.

	Yards	£
1913	7,075,252,000	97,775,855
	Square Yards	
1920	4,435,405,000	315,717,631
1921	2,902,288,900	137,132,298
1922	4,183,729,100	142,436,751
1923	4,140,231,900	138,251,864
1924	4,444,704,400	153,461,220
1925	4,433,745,300	150,526,060

The following is a list of cloth quotations on particular dates during the past twelve months:

	32-in. printers 116 yds. 16 x 16 32's & 50's		36-in. shirtings 76 yds. 19 x 19 32's & 40's		38-in. shirtings 38 yds. 18 x 16 10 lb.		39-in. shirtings 37½ yds. 16 x 15 8¼ lb.	
1925	s.	d.	s.	d.	s.	d.	s.	d.
Jan. 2	36	6	41	3	19	4½	17	9
Feb. 6	35	6	40	0	19	0	17	3
Mar. 6	36	6	41	0	19	9	18	0
April 13	36	0	40	3	19	3	17	9
May 1	35	0	39	0	18	9	16	9
June 4	33	0	37	3	18	3	16	6
July 3	32	3	36	6	17	9	16	0
Aug. 7	32	0	36	0	18	0	16	3
Sept. 4	31	9	35	9	17	9	15	10½
Oct. 2	31	0	35	6	17	9	16	0
Nov. 6	29	3	33	9	16	6	14	7½
Dec. 4	28	0	32	9	16	0	14	6
Dec. 29	27	3	31	9	15	6	14	1½

Spinning Unsatisfactory

Towards the end of 1924, spinners of yarn met with a distinct trade improvement, and it was decided to work the mills longer hours. At the beginning of 1925 the factories engaged on American cotton were running 39¼ hours per week instead of the usual 48 hours. Demand very soon became flat, and owing to the absence of fresh orders the margin of profit began to suffer. Most counts and qualities that had been very scarce became more plentiful.

The position of affairs was discussed by the Short Time Committee of the Masters' Federation, and at the end of January it was decided to recommend an increase in short time by working the mills only 35 hours per week. A ballot on this proposal was taken, and the necessary support of the members was obtained. The new working hours came into operation from the middle of February. The reduction in output did something to check the loss of ground experienced by producers earlier in the year, but the position of spinners still tended to become worse, much difficulty being met with in selling and clearing the smaller production of the factories.

Demand ran on odd lots, and there were very few instances of contracts of weight being arranged. In certain counts and qualities the margin of profit practically disappeared. The comparatively small output of 35 hours per week was more than sufficient to meet the requirements of buyers, and there were more signs of stocks accumulating in first hands.

In May there were indications of the short time movement breaking down. Owing to many complaints of members of the Masters' Federation not observing loyally the curtailment of output recommendation it was decided to ask spinners for an undertaking that they would not run their mills more than 35 hours a week. Owing to the replies being unfavorable, the Masters' Federation was compelled to abandon the short time of 13 hours per week, but it was decided to recommend a stoppage of 8¾ hours per week, which was equal to one day. This meant a return to the working week of 39¼ hours. The suggestion was supported by the members and this scale was maintained until the middle of November, when the Masters' Federation again considered the situation, and recommended increased curtailment of production, by returning to a working week of 35 hours. The proposal was rejected, but members were urged to maintain the 39¼-hour week.

Numerous spinning companies during the year have felt the increased financial stringency and latterly more cases have been mentioned of concerns going into liquidation.

Compared with 12 months ago, the position of spinners of Egyptian yarns is worse. Last spring numerous producers were very adversely affected by the scarcity of supplies of Sakellaridis, and the striking rise in prices. It has been exceedingly difficult for many mills to turn on to other qualities of raw material. Business has been thoroughly disorganized. There was some improvement towards the end of the summer, but latterly trade has been at a low ebb, owing to the downward movement in values, and the expectation of still cheaper rates. It is likely, however, that conditions in this branch of the industry will improve before very long.

Export Yarns

Shipments of yarn have been rather larger than in 1924, but for the most part this section of the trade has not been very satisfactory. An increased turnover has shown itself for several European countries and the bigger exports to Germany have caused much comment. A fair amount of trade has also been done for the Near East. Operations for India have been rather disappointing, and English spinners are meeting with increasing competition from Japan. During the last few months, however, demand for India has certainly broadened, and according to some advices our customers are finding Japanese yarns unsatisfactory, and are inclined to turn again to English goods.

Considerable irregularity has prevailed in quotations for cotton mill shares. Prices as usual have followed the trade reports, and owing to the fluctuations in demand for manufactured goods there have been many changes in share prices. Recently a downward movement has been experienced, and now and again selling pressure has been reported by brokers, chiefly owing to the fear of calls for additional capital and the possibility of financial difficulties. There are many people who believe, however, that early in 1926 the share market will be much firmer.

The following is a comparative table of yarn shipments from the United Kingdom for the pre-European War year of 1913 and the past six years:

	LB.	£
1913	210,099,000	15,006,291
1920	147,432,400	47,585,814
1921	145,894,900	23,924,879
1922	201,953,000	26,474,623
1923	145,017,400	21,010,689
1924	163,091,900	27,792,536
1925	189,532,100	30,500,647

The following is a list of cotton and yarn quotations for the past twelve months:

		American yarns			Cotton F. G. Fair Egyptian	
	Cotton middling American	32's twist	40's weft	50's weft	Sakellaridis Egyptian	yarn 60's twist
1925	d.	d.	d.	d.	d.	d.
Jan. 2	13.57	24	25	29	30.15	43½
Feb. 6	13.28	22¾	23¾	28½	34.50	44½
Mar. 6	14.37	23¾	24¼	28¾	36.00	44
April 3	13.72	22¾	23½	28	33.15	42
May 1	12.98	21¾	22¼	26¾	30.85	41
June 4	13.48	21¼	21¾	26	31.30	41
July 3	13.35	20½	21¼	25¼	31.85	38
Aug. 7	13.35	20¾	21¼	25	32.00	37
Sept. 4	12.51	20¼	21	24½	27.95	35
Oct. 2	12.72	20	20¾	24	28.20	37
Nov. 6	10.49	17¾	18½	21½	21.90	34
Dec. 4	10.42	17¼	17¾	21	18.90	33
Dec. 29	10.26	16½	17¼	20½	17.30	31

Prospects

Although recent conditions in the English cotton industry have been far from encouraging, there is a distinct hope of better times in the near future. No trade of importance has been done since the slump of 1920. It may be said that for five years dealers and merchants have operated from hand to mouth, and there has been a tendency for stocks of manufactured goods to be reduced in leading distributing centres throughout the world. Compared with a year ago, the most vital change in the situation is the fact that raw cotton is decidedly cheaper, and it is possible for consumers to buy manufactured goods at lower figures than for three or four years back. It is a tremendous advantage to England to know that supplies of raw cotton during the next 12 months will be abundant, as not only will the growth in America be of substantial dimensions, but there is every probability of a record output in Egypt. A trade revival is dependent upon the stabilization of values, and confidence on the part of merchants that prices are safe.

It must not be forgotten that spinners of yarn and manufacturers of cloth in Lancashire are dependent upon foreign markets to take off about 75% of the full output of the machinery. The world political situation, therefore, is most important. As far as India is concerned, which of course is our chief outlet, the prospects may be considered healthy. Compared with a little time ago, there is less danger of unrest. For several seasons the monsoon has been successful, and on the whole the natives are prosperous. It is true that the home mills are providing more and more cloth, and at the same time there is severe competition from Japan, but if the needs of the population increase, dealers will have to come to England for supplies.

It is quite impossible to forecast what is likely to happen in China during the next few months, but conditions cannot get much worse than at the present time. Considering the disturbances, quite as much business is being done at the moment as could be expected. The auction sales in Shanghai are still suspended, but fairly good prices are being obtained for cotton goods when they are sold.

There is uncertainty as to the future state of affairs in the Near East. It is likely that Egypt will obtain lower prices for her cotton this season compared with last, but the output will be very large, and later on this should mean an active demand for manufactured articles. The outlook in Turkey is an unknown quantity, and the fighting in Syria is having an adverse effect upon trade developments.

A hopeful feeling prevails with regard to the outlook in South America, and there is every probability of a continuance of trade on a larger scale for several African markets. Recently there has been a distinct improvement in the business passing for several Continental countries, and it is likely this trade will be maintained.

In goods suitable for home consumption there is every probability of a steady offtake, as there is the appearance of some improvement in the leading industries of the country. The unemployment dole may be abused, but the free circulation of money in this way means that the purchasing power of the public is well maintained.

There are fears that it will be some time before really healthy conditions prevail in the spinning branch of the trade. A great deal depends upon increased activity in piece goods. If more idle looms are restarted then it will mean a bigger consumption of yarn, and of course if this happens, spinners are bound to benefit. The coming year is likely to be more prosperous for firms engaged in the production of Egyptian yarns, but the outlook for the American spinning section must be described as uncertain. It is satisfactory to be able to state that very amicable relations prevail between the employers and the trade unions.

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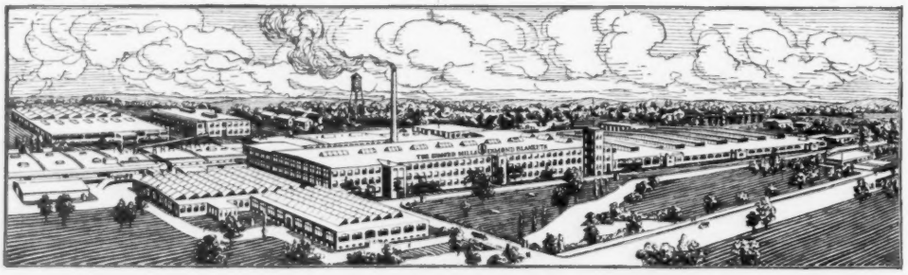

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Year of Uneconomic Procedure in Cotton Yarns

Short Selling and Elimination of Commissions Produced Unusually Small Margin of Profit to the Seller—Effect of Enforced Curtailment Upon the Spinner—Outlook for More Satisfactory Conditions in 1926 with Betterment of Trade Practices

FEW dealers in cotton yarn regret the passing of 1925. It was a difficult and discouraging year from the seller's standpoint. In addition to increasing competition the uneconomic methods pursued were destructive to profitable business and discouraging to effort on the part of those who were reluctant to indulge in speculative procedure. The only saving grace that is seen in connection with the developments that took place during 1925 is the apparent lessening of the speculative tendency and the determination to operate in 1926 on a more stable and economic basis. Whether experience has been a sufficiently effective teacher to make such a resolution a rule of the trade remains to be seen. Enough has transpired of late to indicate that certain important houses which have been regarded as leaders in the merchandising of yarns and who might also be regarded as responsible in a measure for much of the speculation that has existed of late will be eliminated as leaders of this character of selling, while others who may continue to do business along old lines may be forced by the march of events to modify their operations because of financial reasons.

Full Commissions Unusual

One of the outstanding features of 1925 in the cotton yarn market has been the inability of sellers to obtain full 5% commission on sales of yarn. The statement has been made by those in a position to know that the amount of yarn thus sold during the entire year is practically negligible. This fact is due to several causes, the most prominent of which of course is the development of a species of competition, in face of which the old rate of 5% was bound to fall. This involves the sale of yarn direct by the spinner and the amount of short-selling which was apparent in many periods throughout the year. The narrow margins at which yarns have been sold have created a species of uncertainty as to possibilities of business that has been most disconcerting, and has led to practices which formerly would not have been countenanced. In altogether too many instances has the seller agreed to give the product of a specific mill on a customer's order when he knew at the time the order was taken there was no chance of obtaining this specific yarn at the figure quoted the customer. This situation has been linked up with what may be regarded as the bucketing of orders in very many instances. In other words, dealers have accepted propositions from their customers on what they anticipated would be a declining market and have pigeonholed orders awaiting a more favorable time at which they might negotiate with the spinner. They have used the fact that they could place orders with the spinner as a cudgel to bear his quotations. In instances they have been successful, but in a good many other instances the spinner, knowing the market had been sold short, forced the dealer to cover at a higher price. This has necessarily meant either an absence of profit or an actual loss to the yarn merchant, and at times has been a boon to the spinner.

Trend Toward Control of Accounts

With the development of these unsatisfactory conditions there has come to be a growing feeling in the market that a change must be effected in the marketing of cotton yarns if conditions satisfactory alike to the spinner and the dealer are to be realized. This change has been made in certain quarters and is likely to be more general during the months of the present year. It anticipates the time when spinners will place their product in the hands of reputable dealers or commission houses, giving the latter sufficient leeway in the matter of accepting or declining quotations in order to bring about a more economic and business-like method of marketing. Of course there will be those among the spinning fraternity who will not for a long time agree to change the old-time method of disposing of their yarns to whoever will quote the highest price, irrespective of whether this individual is buying for his own account or has orders on his books from the consumer for whom the yarn is bought. It is not expected that the industry will execute any general right-face, but the signs of the times indicate a gradual evolution is taking place which is making for better conditions all along the line.

Dealers Bought Early

It was not until the second half of the year that any general evidence of a change in the dealer's attitude toward the purchasing of yarn for his own account became evident. When 1925 opened it was expected there would be a renewal of operations which had been intermitted by the holidays and attendant stock-taking. The expected improvement did not materialize with the consequence that dealers with stocks on hand endeavored to realize on their holdings. A more or less irregular market resulted and similar conditions continued throughout the early months of the year. Many of the transactions which were then hard to understand now appear to have been the result of an oversupply in the hands of the dealer which was disposed of either because of financial reasons or because of the fear that it would be necessary to take a loss on this yarn if it were held indefinitely. In addition the other element of uncommercial operations began to make its appearance in the very evident disposition on the part of certain of the trade to sell the market short. It may now be confidently said that with very few exceptions this effort to forecast conditions proved disastrous, and is one of the reasons for the prediction that short selling will be much less of a factor in the 1926 history of the cotton yarn trade.

Buying Influenced by Cotton

Probably there has never been a year in the cotton yarn trade when the influence of cotton has had a more telling effect upon the volume of business done. Formerly a generally accepted tendency to advance brought buyers into the market because of the fear that their level of costs would be increased unless they took advantage of current conditions and did not run the risk of paying higher prices by waiting. It was different last year, and this difference was due in a large measure to the hand-to-mouth method of buying that characterized not only yarns but every other class of textiles. The buyer appreciated he might have to pay more if he waited to supply his requirements, but on the other hand he was willing to wait, figuring on the possibility of a decline which would enable him to average down on his costs. This policy, as it worked out, proved profitable in a great majority of instances. Inasmuch as the average consumer did not carry stocks there was no chance of depreciation, and where in instances it was necessary to pay a higher figure because of a waiting policy this was offset by the advantage secured in a market that showed more declines during the year than advances. When it is considered that raw material has dropped from over 25c to below 20c, with only a few periods of fractional advances in raw material and yarn, it is easily demonstrable that the buyer has secured an advantage to himself by ultra-conservatism and by absolute refusal to anticipate requirements.

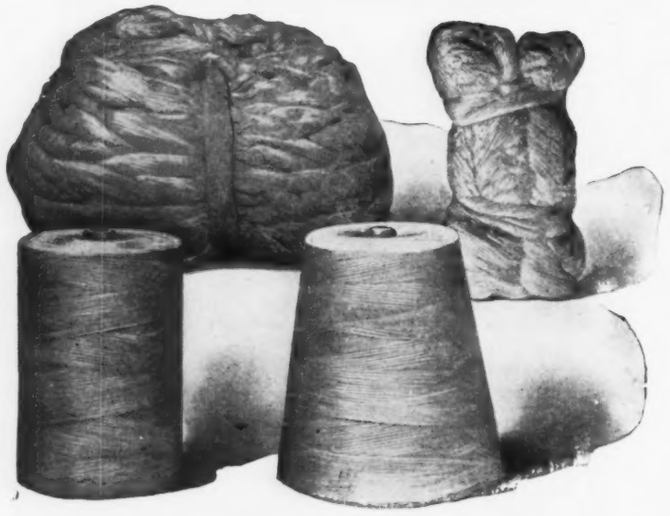
Government Reports Disconcerting

There were more chances of wrong guesses during 1925 than in ordinary years. It seemed to the dealer at least that whenever he took a stand with respect to the future something happened which would diametrically change conditions and make his forecast utterly fallacious. It is the opinion of the trade in general that the Government reports on cotton had much to do with this uncertainty. What would have happened had there been fewer reports of course cannot be stated, but it is certain that the frequency of estimates produced a condition of irregularity not only, but also for a certain period each month almost a stagnation of business. For a certain time prior to the reports the trade was speculating on what they would be and were not willing to buy, and also after the reports were issued were trying to figure out the possible effect upon the market with consequent further unwillingness to operate. Up to the middle of the year prophecies in the trade all tended in the direction of foretelling a small crop with resulting higher prices for cotton and yarn. As the crop reports proceeded, this impression changed and prophecies from then on were for the most part of a higher total crop than the Government predicted. There were a few who have felt all along, and who still feel, that the Government's estimate of over 15½ million is too high and that when the total for the year is absolutely decided it will be discovered that there has been an over-estimate. Whatever may be said as to the value of reports and as to the accuracy of the estimates, there is no gainsaying the fact that they have been an active influence in increasing the fluctuations of yarn and in developing the element of speculation which played such an important role last year.

The Drouth and Its Effect

Early in the year the desirability of curtailment began to be talked about and the agitation for a shut-down increased in strength as the months went on. Various plans for concerted action were advanced and much was written about the vital necessity of curtailing production if the market were to recover to anything approaching normal conditions and maintain a steady level. While a goodly proportion of spinners subscribed verbally to the idea of curtailment, it was not until such a procedure was forced upon them that any general action could be secured. One of the severest drouths that the South has experienced in years brought about a critical power situation with necessary remedial action on the part of power companies. For several months yarn mills of the South operated on a three-day and less per week schedule. This was compulsory as power was turned off for any further operations. As the great majority were dependent on furnished hydro-electric power, this meant a most drastic shut-down and lessening of production.

The effects of this curtailment are still noticeable. It enabled a good many spinners who had odd lots of yarn in stock to get rid of them at favorable prices and prevented an accumulation which would doubtless have occurred even with a curtailment agreement had the shutdown not been made compulsory. That it was an unmixed blessing can hardly be



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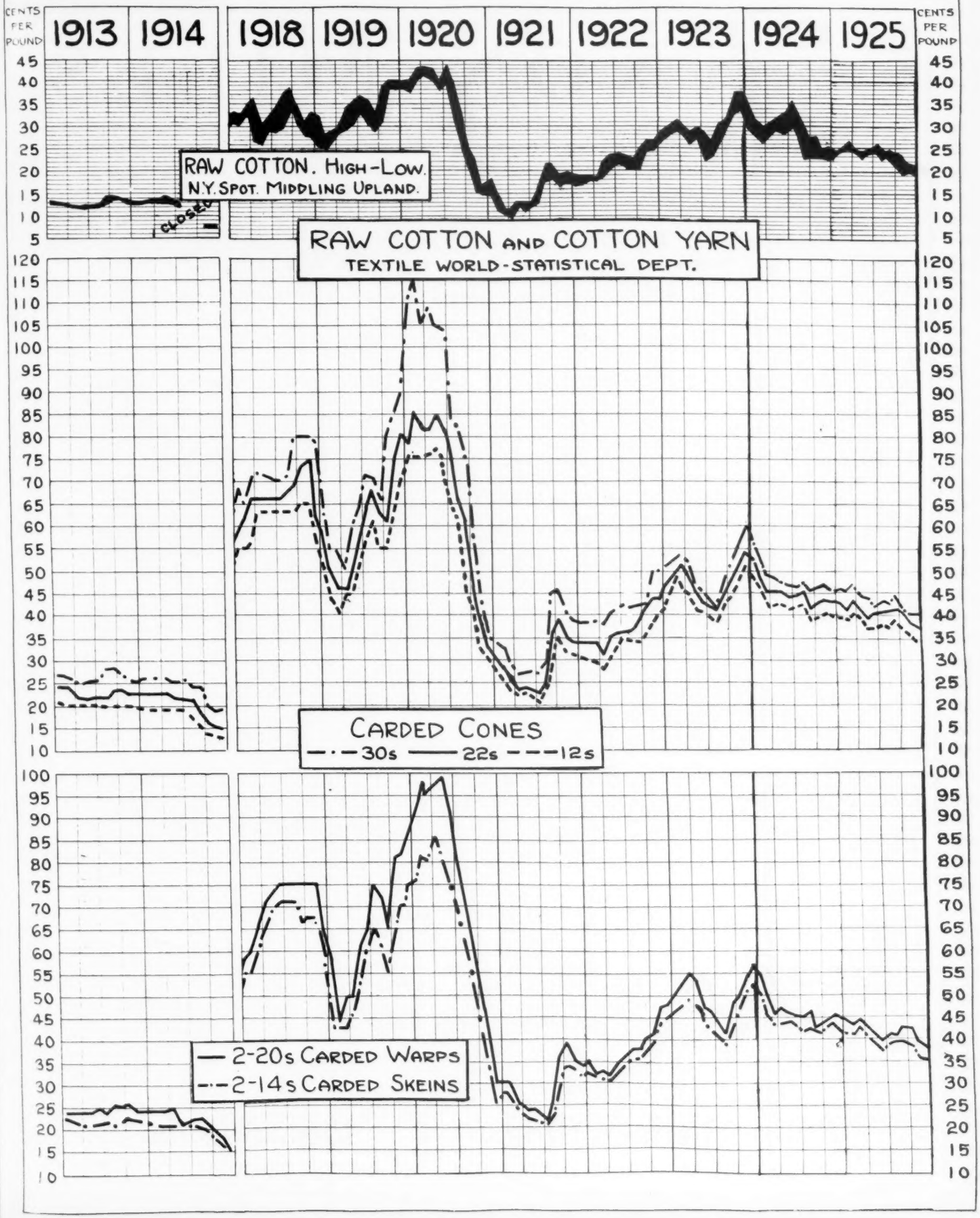
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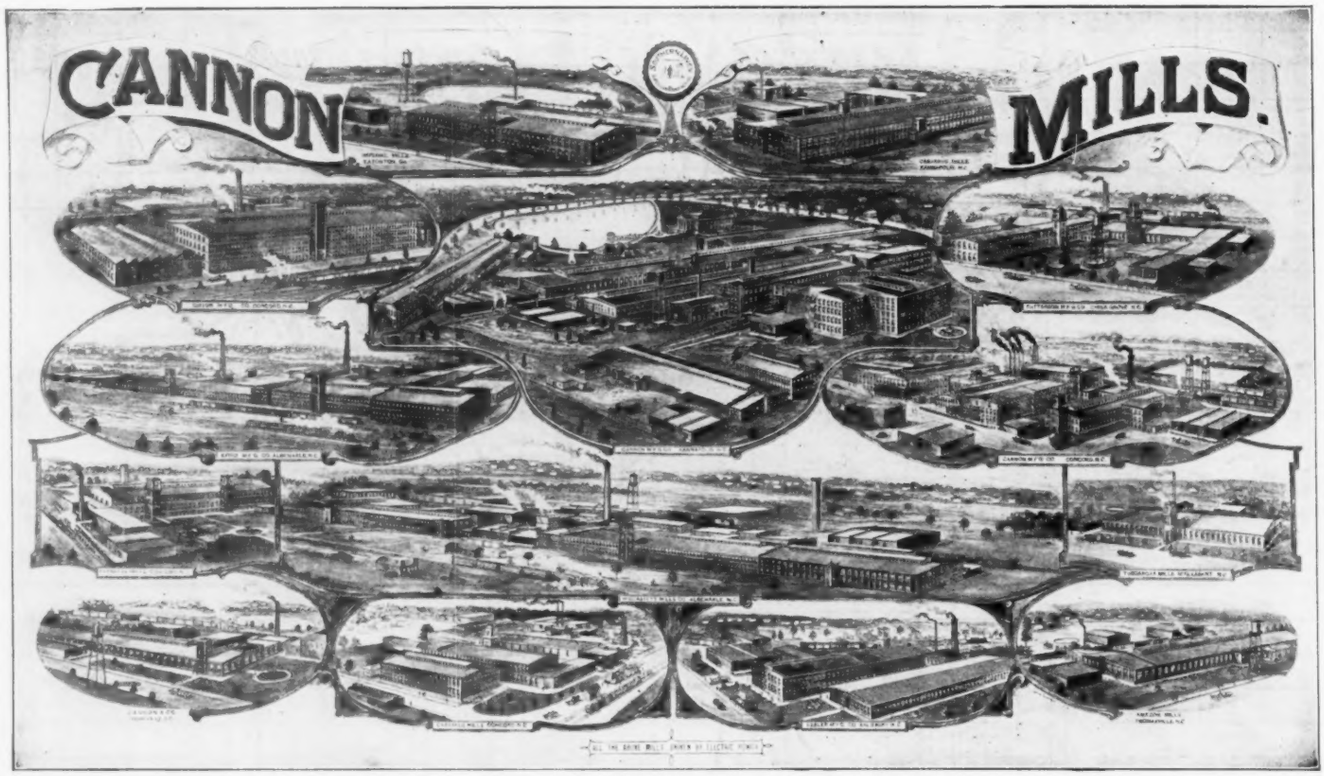

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asserted unequivocally. There is no doubt that it steadied the market, but at the same time it lessened the possible business that might have been otherwise secured. There is no denying the fact that those who were able to operate with their own steam plants procured business which their competitors were unable to take, and in this respect benefited materially. It is also believed that during the period of curtailment orders were taken for forward deliveries, certain of which have not been completed to date. This fact is a contributing cause for the present statistical strength of spinners generally. It has been felt at times that talk of a sold-ahead condition by certain spinners was in the nature of propaganda in order to influence the market. It now appears that many of the statements regarding status of the spinner were borne out in fact. This is proven by the inability of the spinner to quote for nearby deliveries and also by the difficulty which sellers are having at the present time in obtaining shipments according to contract. It is the exception rather than the rule to find spinners who are not sold ahead into March. There are a few who because of a peculiar shift in demand have taken orders on their product well into the current year, and at least one case is reported of a spinner who has contracted for his year's product.

Statistical Strength Increases

This favorable situation with regard to advance orders, coupled with absence of stock, has produced a firmness of attitude which has shown increasing strength during the last few months. As a matter of fact, there have been few periods during the year when the spinner has shown any particular distress or made any drastic bid for business. This has meant a wide spread between the prices that the spinner has asked and those at which the buyer would operate. He has known that the dealer, because of eagerness to secure business and by reason of intense competition, would be willing to name a decidedly lower figure than any which the spinner would consider. Earlier in the year when dealers owned stocks, a certain proportion of which were bought at favorable prices, it was not an uncommon thing to note a difference of 3c a pound between the spinner's asking price and the figure at which the yarn was actually bought. The absence of stocks and the continued maintenance of spinners' prices have lessened this spread materially. Buyers now are obliged to figure on the spinner's asking quotation or on that quotation less the elimination of part commission by the dealer. Of course, there are exceptions to this as in the recent reported case of 20s-2 warps, which were said to have been sold short and which never reached within 2 or 3 cents of the selling figure viewed from the spinner's standpoint.

Outlook for Greater Stability

The opening month of the year is never expected to witness any general demand from the trade or a renewal of operations. There is always a certain amount of business which is in the nature of a hold-over from the previous year — business that is assured, but the consummation of which is postponed until after the turn of the year. Within the last week or two there has been evidence of increasing interest and a greater disposition to anticipate requirements. The feeling is becoming more general that 1926 is not to witness many of the difficulties and unsatisfactory occurrences of its predecessor. One favorable condition is that the market starts from a lower level than at many times in the past. Also there seems a likelihood that conditions have been more stabilized than often in the past and that as a consequence buyers can operate with more certainty. Few have the temerity to forecast any radical change from the conservative buying of the last year, but nevertheless it is felt that the buyer is not likely to so confine himself to his immediate requirements as not to take advantage of a possible upward trend by buying ahead at a level which might not continue indefinitely. The various branches of the yarn-consuming trade did not have a satisfactory year and were compelled to operate on very close margins. The figures at which they sold their product necessitated utmost caution and economy in the purchase of yarn. With a more or less definite attitude regarding the improvement in general textile conditions, at least for the first half of the year, the yarn dealer looks forward to a more satisfactory and pleasant experience. This will be borne out if some of the evils and uneconomic practices in the marketing of yarn which have been touched on in this review are to be eliminated or minimized. That there is hope for such an evolution is generally admitted. It is believed that 1926 will witness a decided change in the methods by which cotton yarns are sold and that these changes will be distinctly for the betterment of the industry.

A Fair Year in Combed Yarns

Could Forecast Further Improvement for 1926 if Certain That Another Drouth Would Force Curtailment of Production

OUR forecast of business for 1925 in combed and mercerized yarns was to the effect that "the most unprofitable year (1924) on record had forced changes that seem certain to result in more stable conditions." For a very complete realization of this forecast we can take no credit, but must give it to an all-wise Providence who saw fit to give Carolina spinners, and the trade generally, an object lesson in the benefits of a supply that balances demand: we refer to the drouth in the Carolinas during the late summer and early fall that reduced textile production of all kinds in such a substantial way that stock accumulations were cleaned up and a dragging and unprofitable market was converted into one of fair profit.

We were correct in our forecast that the peak of stable cotton prices would be touched in March or April and that prices would then show a steady decline until September or October, and we were also correct in our assumption that the trend of combed and mercerized yarn prices would be of similar character, but must admit to an error in the forecast of maximum price levels to be reached. It is true that the trend of combed yarn prices was steadily upward until cotton commenced its slump in April, but for the next four months the lowest prices of the year were touched, and during the last four months of the year, while cotton was steadily declining, combed and mercerized yarns attained their high levels for 1925, thanks to curtailment of production forced by the drouth and to active buying stimulated thereby.

Salient Features of 1925

No intelligent opinion of the outlook for 1926 can be ventured without a fairly definite idea of the salient features of this branch of the industry and its business during 1925, including such important changes as may have taken place in production and consumption. With these facts as a basis it should be possible to face with a little more certainty the uncertainties of 1926 in the trend of general business, of cotton prices, of style, of rayon competition and other factors that will affect demand for and prices of combed and mercerized yarns.

In last year's review of these markets the importance of readjustment of combed yarn production to demand was emphasized. It was assumed that fully 25% of the combed sales-yarn machinery had been diverted permanently to carded yarns or to weaving. In the light of experience during 1925 there would seem to be no reason for changing this assumption. Furthermore, it is reasonably certain that additional combing machinery in New England sales-yarn mills will be diverted to weaving, and possibly some of that in southern mills. Linked closely with this phase of the subject is the increasing competition of rayon, which not only displaces a certain amount of combed and mercerized sales yarns, but also unbalances machine equipment of weaving mills using rayon and renders the latter potential competitors with a part of their spinning machinery for sales yarn business. Whatever may be the case in the future, however, there was no visible increase in competition from this source during 1925. One of the most encouraging features of 1925, in fact, was the notable absence of any marked increase in productive capacity; an exception might be made of mercerized yarn capacity which showed a considerable increase in the South, but which was counterbalanced to a considerable extent by transfers south or elimination of northern equipment.

Prices Comparatively Stable

One of the outstanding and most encouraging features of the combed and mercerized yarn market last year was the stabilized condition of prices as compared with those of any recent year. It is undoubtedly true that the range would have been wider had not southern production been restricted by the drouth last Summer and Fall, but even if the latter had not intervened it is hardly likely that prices would have dropped more than 5% below the average level obtaining from May to August. As it was, the range from low to high price levels on 60s-2 ply combed peeler warps, skeins and cones, which are a fair barometer of the market, was only 8c, whereas in 1924 it was 20c, in 1923, 15c, in 1922, 20c, and in 1921, 45c. It is notable also that this was true despite a price range on staple cottons that was approximately equal to that in 1924 and 1923, much greater than that in 1922 and only exceeded by that of 1921. This comparative stability of prices would appear to confirm our contention that demand and supply for combed and mercerized yarns are more evenly balanced than for many years.

What of Rayon Competition?

Competition of rayon with the 6,000,000 to 6,500,000 bales of cotton used by this country annually is a matter of too little importance at the moment to warrant consideration, since our consumption of rayon in 1925 was less than 2% of the cotton used, figuring the latter with waste out and on a yarn basis. But if it were to be assumed that approximately 75,000,000 pounds of rayon that is expected to be consumed in this country this year is to be a direct competitor of the approximately 150,000,000 pounds of combed and mercerized sales yarns that may be produced the problem of meeting such competition would become of decided importance. Fortunately, the amount of rayon that will come into direct competition with combed and mercerized sales yarns is very much smaller than this, but unfortunately no one knows the approximate extent of past or immediate future competition. With the rapid increase in rayon production it is becoming a serious competitive problem for this branch of the cotton industry, and also for the growers of staple cotton, and it is a problem that might well be worth systematic investigation.

Fortunately rayon displaces silk, worsted and carded cotton yarns as well as combed and mercerized sales yarns, and a very large part of the burden in the cotton industry is borne by cloth mills which spin their own yarns and which suffer the unbalancing of their spinning equipment without seeking a market for their surplus yarns. Furthermore, to the extent that rayon makes a market for products that would not be sold otherwise it also creates a certain demand for combed or mercerized yarns. It is

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hardly to be expected that rayon competition will become a serious factor for producers of combed and mercerized sales yarns during 1926, but what may happen a few years hence warrants the serious study and consideration of the trade.

A Forecast

Assuming that there will be no marked slump in general business during the first half of 1926, and that textile business as a whole has yet to participate in the wave of prosperity, and bearing in mind that no man can predict what the next cotton crop and its prices may be, it seems reasonable to assume that there will be at least a moderate increase in volume of business during the first half of the year with better profits than the average of 1925 for those sales yarns spinners who own their cotton at favorable prices. It would be possible to predict much more substantial improvement in combed and mercerized trade this year if it could be certain that another drouth, or its equivalent, would maintain supply and demand upon an even keel.

Good Year for Two-Ply Combed

Spinners of two-ply combed yarns, including that large portion taken by mercerizers, have enjoyed one of the best years both in regard to volume of yarn sold and prices received for a long period. This condition was more noticeable during the latter half of the year and 1926 opened with a strong statistical position in regard to stocks on hand as a result of the practical absence of yarn supplies at times during the fall months, caused by drouth conditions in various sections of the South. In July it was reported stocks had been so seriously depleted that there was less than one-half pound per spindle on hand in comparison with five pounds per spindle at a corresponding date in 1924, and most of this was in odd counts not adaptable to ordinary use so that an especially firm market was found in these qualities during the latter weeks of the year.

In August these yarns were the outstanding feature of the entire yarn market, it being practically impossible at that time for weavers or mercerizers to locate spot lots of worth-while size. As spinners' stocks became depleted they were confronted with a severe scarcity in long staple cottons, especially those used in spinning 50s to 80s or finer, a number of spinners finding it impossible to secure more than a few bales of long staple at a time. Shipments of one or two bales of this cotton came into Gastonia by express while a similar situation was found in deliveries of yarn to manufacturers or mercerizers, several finding it necessary to shut down part of their machinery, stocks having become so low, until additional supplies of yarn could be rushed from spinners.

Lack of Power Felt

The power situation among southern mills was becoming more acute at this time and many combed yarn spinners were forced to curtail operations drastically, aggravating a condition which was already severe because of the shortage of suitable long staple cottons. Early in October the power situation had become worse than noted in the previous month and spinners were, in many instances, running less than 50% or half time. Manufacturers were in need of spot yarn, their stocks having become seriously depleted and these two factors resulted in one of the strongest situations in combed yarns that had been witnessed for many years. It was a sellers' market for the first time since the fall of 1923, and spinners' margins were at a profitable level, although not so attractive as might be imagined when the fact that their production was cut to such a large degree was considered. They were unable to take full advantage of this market because of the lack of sufficient power to turn out their regular production.

In November the power situation displayed signs of improvement and spinners in the affected areas were permitted to increase their schedules, considerably. At this time the cotton market was declining, Government crop reports indicating a large crop, but no reductions were made in long staples. Early in November middling cotton declined three cents a pound while the differentials for long staples rose to this extent upon unfavorable news from the long staple growing sections. No reductions in combed yarns were, therefore, possible, finer counts, particularly 50s and above, remaining as firm as before ordinary grades declined so extensively. Orders were being taken by spinners in good volume during this time, and many had sufficient orders on their books to run them at a fair rate until February or early March, this fact becoming important later in the year when demand slackened and production again was normal, giving spinners a basis upon which to refuse to lower their prices to attract new business.

In the middle of November, and continuing until the end of the year, demand began to decline, and while no great reductions were made it was possible in December to locate spot lots in larger amounts, especially in coarser counts, several cents under prices paid in November. A comparison of prices current at the end of the year with those during the year will illustrate the major swings in two-ply qualities. In January 1925 spinners were quoting 59c for 20s-2, 70c for 40s-2, 80 to 85c for 60s-2 and $1.00 to $1.05 for 80s-2. Firmness was apparent in February and by the early part of March these counts had advanced to 60c for 20s-2, 74c for 40s-2, 85 to 87½c for 60s-2 and $1.10 to $1.15 for 80s-2. The succeeding weeks saw a slightly easier trend, quotations having reached by early June, 57c for 20s-2, 69c for 40s-2 82c for 60s-2 and $1.10 to $1.15 for 80s-2, being more noticeable in coarser counts.

Quotations Advance

Influence of the power condition in the South and shortage in long staples caused a continued movement toward a higher range in quotations, particularly in numbers ranging from 50s to 80s and spinners were securing contracts at 90 to 92c for 60s-2 and $1.17 to $1.20 for 80s-2, an advance of 20c since the first of the year in the latter count. These were the top figures reached at any time during the twelve months and while no drastic reductions were made, prices sagged somewhat from this time, and in December it was again possible to buy 80s-2 as low as $1.13 and 60s-2 at 86c, a decline of two to five cents from the high point. Easiness was caused by smaller demand from mercerizers and weavers who felt increased production would result in a lowering of prices, though spinners continued to occupy an advantageous position so far as business on hand was concerned.

Large Mercerized Business

Price trends in mercerized qualities have been approximately the same as in gray yarns although at frequent periods the margin allowed mercerizers was extremely small based upon current gray yarn quotations. Mercerizers experienced the largest volume of business in 1925 since the post-war inflation period. The disadvantage of this trading was the small margins upon which they were compelled to work, there having been considerable cutting of prices during the year by several factors in this market. Production of mercerized yarns has been increased to a fair degree during the year both from the standpoint of increases by established concerns and by the addition of several new and important firms to this trade. This has resulted in an increase in the amount of mercerized yarns offered in the market and in keener competition so far as prices are concerned, yarns selling at many times several cents under what had been previously considered a small margin above gray yarn quotations.

Steadiness Indicated

Although trading in mercerized yarns became quiet during the latter weeks of the year and manufacturers were able to secure reductions of two cents from market prices, the outlook for 1926 presents a firm appearance. Mercerizers, especially the more important factors, have advance business on their books to run them until late February or early March before which they believe manufacturers will have contracted for at least four months' supply. Long staple cottons have remained firm, it being reported that comparatively little first class staple cotton was available due to damage to the growing crop in the fall by excessive rains; all of which give these qualities a steadiness which is especially noticeable in view of the softness of carded yarns during this period.

Fine single combed yarns have followed two-ply in respect to demand and price range; while 18s, 20s, and 22s, the more active of coarse counts, have varied less extensively, being quoted at 50c to 51c for 18s as the top and declining to 45c at which the bulk of the business during the latter half of the year was placed. Interest in 38s, largely used in 14-cut underwear, declined during this period and a large number of spinners of this count discontinued spinning single yarn and turned to two-ply to take advantage of the active demand. Combed reverse thread spinners have enjoyed a fair year in respect to volume sold and prices received, expansion of demand being greater in average quality threads than in best grades for which a premium is asked.

Cotton Wastes on Lower Level

Off Grade Cotton Likely To Be a Strong Competitive Factor in 1926—Lower Prices Paid on Contracts

THE cotton waste market rounded out the remaining days of 1925 in a rather hesitant manner, mulling over the question of contracts, bewailing the fact that some of the early contracts in the South made before the weight of the low grade cotton was felt were at too high figures, with combers around 82½%, peeler strips 75%, upland strips 70%, and determining that the balance of the contracts should be placed upon more reasonable bases. Nearer the close of the year the market declined slightly on combers and much more so on strips which would come into direct competition with low grade cotton. The price paid at this time for Upland strips in the South of average quality was around 62½% while peeler strips were slightly under 70%.

The year started off at a good clip but the pace was not maintained. Predictions went all astray. The high prices paid on contracts rendered it quite improbable from the beginning that purely merchandising houses would be able to take over such materials and net any profit on their operations. The marked stability shown by cotton, at this time around 24c, was considered to be the precursor of better business, particularly as the consumption of cotton in American mills was on the increase. Advances in low grade, stained, tinged and similar cottons seemed to suggest the maintenance of good prices for average low waste materials. The market was carrying less than its normal amount of waste and reserve stocks both in this country and abroad were quite low.

Outlook for 1926

Whether the waste market in 1926 is to be dominated in price movement by the relatively small supply of choice staple cotton or by the abnormally large accumulation of off grade material is an unanswered question. In the public press the off grade cotton is oftentimes referred to as "unspinnable cotton." This expression conveys a wrong notion and the word "untenderable" is the correct one to be

used. Off-grade cottons are spinnable enough and for various purposes can be utilized by some mills just as well as higher grades. Owing to the distressing times through which the cotton industry has been passing much has been learned in the way of substituting lower for higher grade cotton for many purposes and the consuming tendency has been downward all along the line. Just so long as high premiums are demanded for choice materials just so long will there be a manufacturing necessity for the utilization of substitute grades of cotton and for low materials in wastes.

Opinions are diverse as to the cotton waste situation in 1926. There are indications that good staple cottons will hold at firm prices. Low grade cottons it is said will take the place of card strips and similar wastes, a very general statement looking quite feasible on the surface and yet may turn out to be far from the truth taking the year 1926 as a whole as other predictions in this and other textile raw material markets at the beginning of 1925. This year's crop is no doubt very unusual with abnormal amounts of off grade materials and the better grades of clean, long, staple waste will not be in any excessive volume.

The market at the end of the first quarter of the year found the undertone fair, but the amount of business being transacted was not altogether satisfactory. Export busines was picking up slowly, Germany buying sweeps and oily and soiled cards, with England purchasing limited quantities of comber and fine white cop. The export basis was 24c for comber and 18c for white cop. The continued fall in cotton in the early part of May took the life out of the market. It was positively useless to quote prices for wastes and mill quotations were strictly nominal. There was a wide range between buyer and seller but no disposition to sacrifice materials on the part of big houses. The drop in cotton administered a shock to the Manchester cotton waste market, and was a rather serious matter to those who had contracted well ahead, and exporting from the American side fell to a minimum.

Cotton waste all through June was positively out of line with cotton which was forced to a high level by influences considered speculative. The wastes and by-products of cotton met a very thin market as commission selling of spinnable materials forced the lowest percentage levels of the year. As compared with the early part of the year selling prices of spinnables were 8-10% lower. Comber was offered f. o. b. southern points, either for consumption or export at 19¾c which on 24.7c cotton was approximately 80%. Good grades of strips were purchasable at 75-77c as compared with contract prices of 85-87%.

The market at this time was being allowed to take care of itself by the larger interests of the Exchange. They had no desire to force sales. The situation for a small trader semed to hold very little promise. The margin between contracting prices made at the beginning of the year and the average sales level for several weeks had been too limited to allow of the operations of the trading element in between. There seemed little place for the small trader in the market nor could the big contractors move much stuff in volume except at a loss.

Crop Reports Disturbed Market

The cotton waste market in September was dominated somewhat by the crop reports, the bullish predictions in the early part of the month furnishing a long needed thrust toward lively business while the report near the end of the month checked without destroying the movement in the direction of a more satisfactory market in wastes both as to volume of business and prices obtainable for the various descriptions. Remarkably high prices had been paid and were being paid at this time for Sak. and Pima strips. It seemed as though either the consumption of Sak. cotton had been relatively small or else that the demand for Sak. strips had been abnormally large. These strips sold on their high merit and were at this time unrelated to the price of domestic spot or price of Sak.

Cotton manufacturing in October was slowly emerging from the most difficult period it had encountered during the last 50 years and it could hardly be expected that wastes could have done better under such extraordinary conditions. Although the waste market had been extremely unsatisfactory it had done probably just as well if not better than the parent industry. In the Manchester market demand for all classes of cotton waste continued quiet. A further collapse of American futures caused unsettlement and intensified cautiousness. Hand-to-mouth buying was general and there was a complete lack of confidence in values.

Market Steadies on Lower Level

The market later steadied itself on a level of values more in keeping with lower priced cotton and the trade began to recover somewhat from the shock administered by Government crop estimates. The question of first rank in the minds of the leaders in the trade was whether the large accumulations of off grade cottons would bring about a positive slump in prices at which consumers of low grade wastes would be willing to take on these materials for consumption. Every bale of off grade cotton it was said would supplant either better cotton or a bale of waste. It seemed not unlikely, however, that choice combers and strips might sell on relatively high levels and move on a parity with spot very similar to what might be considered the average parity between these materials in the year 1925. The situation was righting itself slowly. Less anxiety was felt regarding the future of good materials and it was very confidently believed that long stapled strips and comber would sell relatively well all through the year 1926 in spite of the large crop of off cottons which threaten to disrupt somewhat the profitable selling of low grade wastes. It was generally believed that much would depend in 1926 on the contract bases made and that if traders were able to convince the mills that low prices were just and proper, a larger volume of materials might be confidently expected in 1926 to be handled at a normal profit and less capital involved in the operation.

Increased Cotton Crop Alters Trade Problems

Price Must Be Determined Which Will Sufficiently Stimulate Consumption Without Too Greatly Restricting Efforts of Growers—Review of Statistical Position Throughout Year, Covering Crop Movement, Weevil Damage, Etc.—Consideration of Probable New Crop Acreage

THE greatly increased cotton crop of 1925 has made a radical change in the problems to be solved by the cotton trade during the new year. Whereas from 1921 to 1923, the crops of American cotton were inadequate, and the cotton trade was called upon to determine a price which would sufficiently restrict consumption and promote the growth of the staple at home and abroad, the larger crop of 1924, followed by the greatly increased yield of 1925, now calls for the determination of a price which will stimulate consumption without too greatly restricting the effort of growers.

Up to the close of the year no really definite solution of this problem had been established. It was considered of more or less significance in that connection, however, that at 18c or below, the world's trade seemed willing to buy freely, not only from the present crop, but for the coming season as reflected by the action of October contracts in the New York markets. On advances from that figure, the demand of this character seemed to taper off, only to reappear on the declines, suggesting that the world's trade was convinced that cotton goods priced on the basis of 18c for raw cotton in the American markets could be freely distributed in normal or even better than normal volume in the world's markets; also, that such a price might possibly react unfavorably upon the efforts of producers if not to the extent of curtailing acreage, at least, to the effect of discouraging the more intensive cultivation which seems necessary to large yields under prevailing conditions.

Condition at Start

It may be recalled that the opening of the year 1925, found cotton in easier statistical position than it had occupied for several seasons, and the trade rather in doubt as to whether the crop of 1924, aggregating in the neighborhood of 13,630,000 running bales, would be absorbed at the then prevailing price of 24c per pound. The first quarter of the year brought no change in the hand-to-mouth policies of cotton goods buyers in the domestic goods markets, but the export movement was unexpectedly well maintained.

This fact, combined with certain unfavorable preliminary features in the new crop outlook, was reflected by advances which carried the market up to approximately the 26 1-4c level at the beginning of March. With domestic mill consumption showing little or no expansion, however, it was realized that the increase in the demand for export would not be sufficient to prevent an increase in the world's carryover for the season, and after the supplemental buying movement in Southern spot markets subsided early in March, prices turned easier under indications that the coming acreage would establish a new high record.

The evidences pointing in this direction were coupled with fairly favorable weather conditions for planting and the start of the crop and by the middle of May, prices had declined nearly 5c a pound to approximately the 21 1-2c level. This decline proved sufficient to discount both the increase in acreage and the comparatively high initial condition of the crop which was placed at 76.7 as of May 25, compared with a ten-year average of 72% at that date.

The market then came under the influence of dry weather reports. One of the factors on the early-year advance had been a deficiency of winter rainfall in the Southwest and reports of a heavier emergence of boll weevil. The fear during the early spring and summer was that if the growing season should prove dry and hot enough to promote control of the boll weevil, the plant would suffer from drouth; or if there were

frequent showers or rains during the summer to offset the deficiency in subsoil moisture and nourish the plant, the crop would be seriously curtailed by insect depredations.

During the earlier stages of the growing season such apprehensions as this were strengthened by the progress of the crop. From an end-June prospect of 14,339,000 bales, the indications of the Department of Agriculture dropped to 13,566,000 bales by the end of July. The price meanwhile advanced from 21 1-2c level of May to approximately 25 1-2c but the new crop began to move early, while crop estimates turned upward in spite of the drouthy summer, and the trade was called upon to adjust its market's calculations from a crop prospect of around 13 1-2 million bales to a final December estimate of 15,603,000 bales. The effect on prices was a decline from the 25 1-2c level of July 27 to approximately the 18 1-2c level before the Christmas holidays. At this figure for old crop positions and just below 18c for early new crop deliveries a sustaining demand developed, promoted by the rapid rate of absorption, the large proportion of untenderable grades in the crop and the outlook for expanding trade in textiles.

Problems of the Future

As the new year opens, the trade is searching the developments of the past for any possible clue to the future, and while it may find nothing conclusive in the records of 1925, questions have been raised which, at the least, would seem suggestive. Has the demand which would seem to have stabilized the market between the 18 and 21c levels represented confidence in distribution or lack of confidence in future production at that figure? Does the increased crop of 1925 carry any assurance that after several years of diminishing yields, progress in controlling the boll weevil has been sufficient to turn the trend of production upward? It is upon these questions no doubt that the course of prices during the coming year will hinge. Statistically the market is in a much easier position as a result of the increased crop, but the prospective increase in carryover is hardly sufficient to prevent advancing markets should new crop prospects shape up unfavorably during the spring and summer.

If any definite inference is to be drawn from the increased crop of 1925, it would seem to be that cultural methods have made sufficient advance in the South to permit the production of a fair yield per acre as compared with the results of recent previous years, in the event of a comparatively dry summer. It remains to be seen whether methods of boll weevil control have advanced sufficiently to save an equally large yield per acre, in the event of a so-called wet summer. Nevertheless the records would suggest that the boll weevil reached the peak of its destructiveness in 1921 and that since then its depredations have been gradually diminishing.

RAW COTTON STATISTICS FOR 1925

	1925	1924	1923	1922
January:				
May contracts, New York	25.13-23.39	35.65-32.60	29.05-29.06	18.72-15.80
Domestic consumption, lint	589,725	576,644	610,375	526,552
Exports, lint and linters	1,076,075	546,253	473,436	475,910
Ginned to January 16	13,306,813	9,944,032	9,648,261	7,912,452
February:				
May contracts, New York	25.65-24.19	34.97-28.52	30.29-27.22	18.46-16.15
Domestic consumption, lint	550,132	507,876	556,924	472,073
Exports, lint and linters	811,838	482,146	359,657	338,440
March:				
May contracts, New York	26.25-24.22	29.70-26.45	31.59-28.32	18.23-17.50
Domestic consumption, lint	582,674	483,928	623,165	518,450
Exports, lint and linters	734,697	332,168	318,210	461,484
Final ginning report	13,639,399	10,170,694	9,728,306	7,977,778
April:				
May contracts, New York	24.93-23.68	31.95-27.95	30.05-26.90	18.28-17.80
Domestic consumption, lint	597,104	480,010	577,396	446,843
Exports, lint and linters	472,555	320,774	259,984	612,659
May:				
May contracts, New York	24.24-21.65	32.30-30.25	28.85-24.90	21.65-18.26
Domestic consumption, lint	531,471	413,649	620,965	495,674
Exports, lint and linters	330,967	326,357	160,368	469,397
June:				
July contracts, New York	24.09-22.40	30.50-27.75	28.80-25.30	22.95-20.15
Domestic consumption, lint	493,765	350,277	542,166	507,869
Exports, lint and linters	217,786	230,979	214,851	491,079
End May condition	76.6	65.6	71.0	69.6
July:				
July contracts, New York	24.62-22.70	35.40-28.50	27.25-22.50	23.25-20.92
Domestic consumption, lint	483,898	346,671	465,575	458,548
Exports, lint and linters	202,468	211,533	171,465	373,742
End June condition	75.9	71.2	69.9	71.2
Acreage planted	46,448,000	40,403,000	38,709,000	34,852,000
Indicated crop, new season	14,339,000	12,144,000	11,417,000	11,065,000
Commercial crop, old season	14,962,000	11,322,201	11,182,000	11,653,000
World's carry-over of Am	2,800,000	2,890,000	3,065,000	5,123,000
August:				
October contracts, New York	24.45-21.85	25.30-24.05	25.35-21.07	23.00-20.00
Domestic consumption, lint	448,665	537,455	491,604	527,404
Exports, lint and linters	315,825	277,641	244,415	273,308
Aug. 1 condition	65.6	67.4	67.2	70.7
Indicated crop	13,566,000	12,351,000	11,516,000	11,449,000
September:				
October contracts, New York	24.75-22.95	26.25-21.50	30.30-24.86	22.56-22.00
Domestic consumption, lint	483,266	435,216	483,852	495,344
Exports, lint and linters	752,324	737,010	689,435	368,890
Ginned to September 1	1,892,549	958,704	1,141,337	805,218
September 1 condition	56.2	50.3	854.1	57.0
Indicated crop	13,740,000	12,787,000	10,788,000	10,575,000
October:				
December contracts, New York	23.30-18.75	25.90-22.10	31.05-27.12	24.55-20.50
Domestic consumption, lint	543,679	532,620	541,825	533,950
Exports, lint and linters	1,421,482	946,980	781,722	798,664
October 1 condition	.....	53.5	49.5	50.0
Indicated crop	14,759,000	12,499,000	11,015,000	10,135,000
Ginned to October 18	9,519,784	7,615,981	6,409,391	6,981,000
November:				
December contracts, New York	21.73-18.96	24.95-22.55	27.70-30.28	26.80-24.77
Domestic consumption, lint	543,098	492,233	531,631	577,561
Exports, lint and linters	1,206,786	1,306,550	770,002	858,337
Ginned to November 14	12,249,935	11,147,524	8,374,148	8,875,840
December:				
December contracts, New York	20.58-19.60	23.76-22.52	37.15-33.20	25.20-24.05
Domestic consumption, lint	575,271	532,047	461,560	527,945
Exports, lint and linters	984,061	1,075,923	845,581	607,853
Ginned to December 13	14,826,452	12,795,216	9,809,138	9,493,296
Government crop estimates	15,603,000	13,153,000	10,081,000	9,694,000

With a view to illustrating this point, we have compiled the following table which shows the yield of lint cotton per acre, the percentage of damage done to the crop by various causes for a series of years:

Growth Year	Percentage Damage Due to Causes: Climatic	Diseases	Insects	Unknown	Yield Lint per Acre
Pre-War Period:					
1910	15.4	0.4	7.5	5.1	170.7
1911	20.7	0.4	7.9	2.4	207.7
1912	23.1	4.3	6.5	1.2	190.9
1913	13.8	0.5	8.9	1.2	182.0
1914	19.3	0.2	9.8	1.6	209.2
Average	18.5	1.1	8.1	2.3	192.1
Post-War Period:					
1919	21.2	1.4	18.8	0.5	161.5
1920	13.1	1.1	24.0	0.8	178.4
1921	16.1	1.0	35.4	0.5	124.5
1922	17.5	0.8	26.7	0.2	141.3
1923	18.0	0.7	26.6	0.2	130.6
Average	17.2	1.0	26.3	0.4	147.3
Last Two Years:					
1924	Not available				157.4
1925	"	"	"		est. 162.3
Average					159.8

These years we have divided into three periods, the first of which we have called the "pre-war period," but which might possibly be referred to as the period of gradually increasing boll weevil infestation. The second we have called the "post-war period," but which might be termed the period of probable maximum boll weevil damage. And the third period covering the last "two years," may possibly prove to be the beginning of a period of gradually developing control of the insect.

Weevil Damage Decrease

In connection with the above table, it may be noted that no figures on the percentage of damage through different causes are available for the last two years. Had they been compiled, however, they would undoubtedly show a progressive falling off in boll weevil ravages and last season would probably have made no worse a showing than the 18.8% reported for 1919.

It would be premature, however, to conclude that the relative immunity of the past two years resulted from improvement in, or a more general use of controlling methods. Weather conditions during the growing season both in 1924 and last year, were against the rapid multiplication and spread of the insect, and the results in a wet growing season would have to be studied to justify an assumption that the boll weevil menace has been materially reduced or eliminated. It seems, also, that while there was comparatively little damage from these insects last season, the autumn rains increased their numbers and according to investigations by the Department of Agriculture, more weevil went into hibernation this winter than at any time previously since 1915. The percentage of survival and actual infestation next spring depends on weather conditions during January and February or early March, while their activities later and whether or not they seriously damage the crop, will depend upon the efficiency of control measures or the character of the growing season. As the situation stands, however, the weevil is still a menace and can hardly be left out of market calculations.

Probable Acreage

As yet nothing definite has developed with reference to probable acreage. It remains to be seen whether the lower price will lead to such a reduction as is being urged by southern organizations. Ordinarily the futures markets are not very seriously impressed by campaigns for a cut in the area planted, but it is realized, on the basis of past performances, that the price enters importantly into the proposition. It is not altogether clear whether it is the price received for one year's crop which counts in preparations for the next, or whether it is the prospective price as reflected by coming crop months in the futures market that influences the attitude of the farmer. In the following table, which shows the relation of prices to effort as reflected by acreage for the past several years, we have used the price of October contracts in the New York market at the beginning of January and March in each season:

Year	Price of October contracts: Jan. 1	Mar. 1	Acreage planted
1914	11.50	11.43	37,406,000
1915	8.55	8.91	32,107,000
1916	12.49	11.82	36,052,000
1917	16.53	15.94	34,925,000
1918	29.35	29.48	37,207,000
1919	23.00	19.48	35,133,000
1920	30.18	30.01	37,043,000
1921	14.85	12.56	31,678,000
1922	16.45	16.63	34,016,000
1923	24.62	25.83	38,709,000
1924	28.25	25.20	42,641,000
1925	23.75	25.60	*48,160,000
1926	18.45	?	?

* Based on December estimate of 4.6 per cent abandonment and 45,945,000 acres to be harvested.

It may be noted from the above figures that low prices have had a very distinct effect on the area during the period covered and that with but one exception an advance in prices had led to an increase in area. It remains to be seen whether the drop to approximately the 18 1-2c level this year, will discourage planting and some cotton men in the New York trade believe that if the old crop holds up to the 20c level, there will be very little reduction in area next spring.

Nevertheless, on the basis of past records as given above, the decline would seem sufficient to bring about a reduction of between 5 and 10% in the acreage planted, and it may be that the propaganda for a reduction of 25% will have more effect than

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is now anticipated. The actual area, no doubt, will depend as much upon weather conditions during the season for preparing the land and planting, as upon the present intentions of the farmer, and the acreage actually planted, of course, is a less important factor in the final outturn than the character of the growing season.

In short, it is still too early for any intelligent forecast of the acreage or start of the coming crop, but it would seem reasonable to suppose that the start will have the advantage of a better season in the ground than last year, but that there may be a moderate reduction in the area so far as the southwest is concerned, and that in the event of a cool or showery summer, the boll weevil toll may be more severe than in any previous season since 1921.

Consumption Trend

The large crop of 1925, will, of course, be reflected by an increase in the world's carryover of American cotton at the end of this season. The comparatively low price is considered a stimulant to consumption which is expected to show a gain of about 10% over the previous year. There has been some disappointment over figures on domestic consumption during the earlier part of the season, but it resulted chiefly from the enforced curtailment of Southern mills, and as a market factor it was offset by a relatively heavy export movement up to the beginning of December.

On the whole, the trade appears to be looking for a world's consumption of approximately 15,400,000 bales including linters, which compared with an indicated crop of around 16,600,000 bales would point to an increase of about 1,400,000 bales in the world's carryover of American at the end of the season.

The export movement has tapered off since October and after having shown an excess of over 400,000 bales over last year's, was within 100,000 bales of last year's figures early in January. Nevertheless, business in Manchester has improved, while domestic consumption has increased, and if trade abroad continues to improve, it is thought that there may be a secondary buying movement for export account in the southern spot markets during the early spring.

Under normal conditions, the foreign spinner or importer is apt to buy the bulk of his season's requirements early in order to make sure of the desired grades and staples; then to withdraw from the market with a view to completing his requirements when they can be more definitely gauged, and perhaps when a better line on the new crop start may enter into his opinion of prices.

Nevertheless, it is probable that early season ideas of probable exports have been modified to some extent and in making up the following table on possible supply and distribution of cotton in the United States for the season 1925-26 as compared with 1924-25, we have allowed for exports of 8,500,000 bales for the season including linters compared with 8,195,896 last year, 5,869,320 the average yearly exports for the five years 1919-24 and an average of 8,503,601 bales for the five years last preceding the war i.e., 1909 to 1914. Domestic consumption in this table, has been figured 7,200,000 bales campared with 6,842,414 bales last year, linters included, and a consumption of 7,362,201 bales in 1922-23. The average domestic consumption of lint and linters for the five-year period 1919-24 was 6,459,906 bales, including foreign cotton:

	1925–26		1924–25	
Supply:	Lint	Lint and linters	Lint	Lint and linters
Stock August 1	1,610,455	1,838,650	1,555,514	1,770,172
Imports	350,000	350,000	303,183	303,183
Production	15,603,000	16,603,000	13,776,977	14,635,227
City crop, etc	250,000	250,000	188,630	188,630
Total	17,813,455	19,041,650	15,824,304	16,897,212
Distribution:				
Consumed	2,593,979	2,924,987	2,359,007	2,612,458
Exports	4,647,136	4,680,478	4,290,383	4,344,111
To January 1	7,241,115	7,605,465	6,649,390	6,956,569
Left for seven months	10,572,340	11,436,185	9,174,914	9,940,643
After January 1:				
Consumed	3,906,012	4,275,013	3,832,342	4,229,956
Exported	3,702,864	3,819,522	3,706,117	3,843,037
Destroyed	26,000	29,000	26,000	29,000
Total	7,634,885	8,123,535	7,564,459	8,101,993
Stock July 31	2,937,455	3,312,650	1,610,455	1,838,650

The above figures would indicate a carryover in this country of 2,940,000 bales of lint cotton, including foreign growths compared with 1,610,455 last year, or about 3,320,000 bales including linters, compared with 1,838,650 at the end of the previous season, the latter figures being based upon preliminary reports of the Census Bureau which are subject to corrections. This increase in the carryover naturally will leave the market in an easier statistical position, but it is probable that the addition of last year's supplies will consist largely of low grades. In any event, as previously said, it will not be large enough to prevent a higher market should the new crop shape up unfavorably, and at the beginning of this year we seemed to have a fairly well stabilized market on the basis of old crop supplies and distribution, with the further course of prices depending upon the new crop outlook. In this connection, however, it may be noted that the prices at which the market now appears to be stabilized for early new crop deliveries are low enough to stimulate consumption, and may, also, prove low enough to discourage especially intensive cultivation.

Crops Abroad

Last autumn there was an impression that the increase in the American crop would be accompanied by a decided increase in the crops abroad. The latest available information, however, hardly bears out that assumption. According to the estimates so far received by the Department of Commerce, an area which last year outside the United States which last year produced about 9,592,000 bales will this year turn out in the neighborhood of 9,706,000. Adding in these figures the respective crops of the United States, we have an anticipated total for this season of 25,309,000 bales for these countries compared with 23,222,000 the previous season.

The world's total production of 1924-25 was 24,700,000 bales, of which the amount destined to enter commercial channels for factory purposes, or the crop to be reckoned with in statisitics on distribution, was 23,825,000 bales according to the Census Bureau. Assuming that crops of other countries will be neither larger nor smaller than the growth of 1924, we have a total indicated world's production of approximately 27,000,000 bales to deal with during the present season, of which perhaps 26,000,000 bales will enter into the calculated consumption, compared with a world's consumption during the previous season of 22,640,000 bales, the figures on both production and consumption being exclusive of linters.

A feature of the season has been widespread criticism of Government crop reports, with particular reference to the frequency of their publication. The system of interpreting condition figures by par values does not appear to be generally understood, and a failure to realize that a crop indication made early in the season is merely intended to show what the crop promises to be in the event of usual weather and growing conditions during the balance of the season, seems to have been largely responsible for the agitation. Departures from the usual in weather and growing conditions at any time during the growing or maturing period may make a very material change from the crop prospect. Last season it is possible that the pars compiled for use with the earlier season reports made allowances for deficiency of subsoil moisture in the southwest and for anticipated boll weevil damage in the eastern belt. The latter did not materialize, and the Department found it necessary to increase its estimates rapidly toward the end of the season. The difficulties of forecasting the outturn of a cotton crop before the end of August should be very readily appreciated by anyone who has experience of growing hazards, and it would seem that the question of importance with reference to Government forecasts is whether the weight they carry in the formulation of sentiment and the making of prices is disproportionate to the degree of accuracy that it is possible for experts to attain in compiling such figures.

Large Crop Short on Good Staple

Longer Cottons Hold Fairly Firm—High Price of Seed May Restrict Planting of New Crop

MEMPHIS, TENN.

MID-SEASON stocks of cotton here are heavy; about half unsold; demand is light. Approximately 40% of all the cotton here is of untenderable grade, but very little is without good spinning value. Stocks usually are heaviest here during the last two weeks of December and the first half of January; indications are that the season's peak stock has not yet been reached, but there is no present probability that the record of 376,000 bales, established Jan. 18, 1921, will be equaled. However, stocks at all interior points are heavy, in many instances exceeding warehouse capacity, and much cotton remains to be picked and ginned.

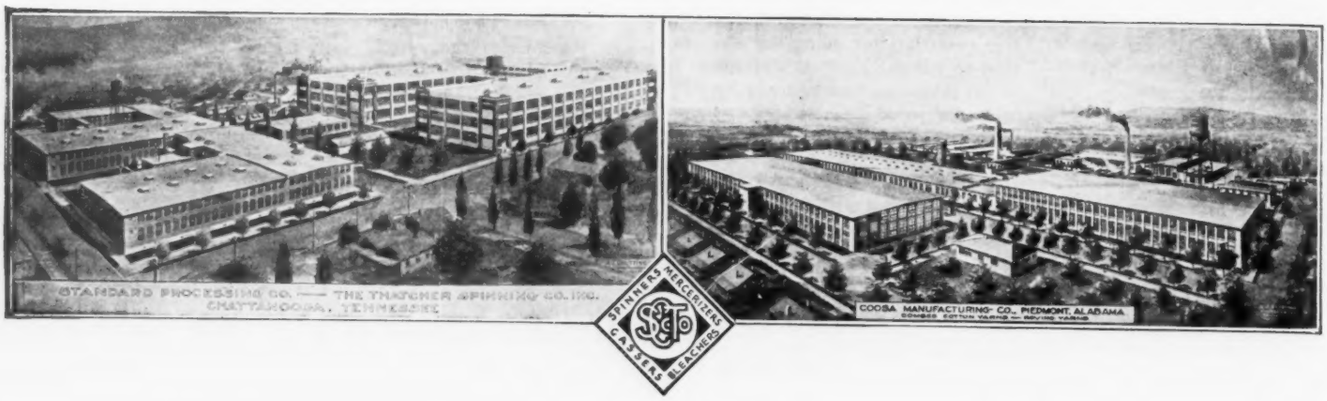
Staple Basis Well Held

Staple basis has held remarkably well. Middling 7/8-inch cotton is down about 5c a pound compared with a year ago. Middling 1 1/8 staples now command a premium of 600 to 700 points against 450 a year ago, 1 3-16 850 to 950 points against 650, and 1 1/4 1050 to 1250 points against an average of about 900 points.

The season started Aug. 1, with premiums well maintained notwithstanding prospects for a large crop in staple producing territory and despite meager forward business. The old crop supply had been exhausted, insofar at least as southern offerings were concerned, months before the close of the fiscal year, Texas drouth inspired the belief that the burden of the 1 1/8 supply would be thrown upon this territory, and few, if any, expected a total American crop in excess of 15,000,000 bales; the expectation was for about 14,500,000 bales, on the average. The position of staples gradually strengthened through the last six months of the 1924-25 fiscal year. Strict middling 1 1/4 staples sold as high as 41c, strict middling 1 3-16 at 36c, and 1 1/8 at 33c. Premiums paid during the closing months of the old fiscal year were far above the average for the season and reflected scarcity. Stocks of the staple association were exhausted, and final settlement with members was under way early in April; the same was true of Tennessee, Arkansas and Missouri cooperatives; Memphis stocks of all kinds of unsold cotton in hands of factors were reduced to 2,000 bales by Aug. 1.

Disappointing Crop

In some respects, although the larg-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est ever, the crop of 1925-26 was the most disappointing ever produced in Memphis territory. Rains started during the last week in September and were of almost daily occurrence until about Nov. 10; fully 50% of the crop was weather damaged, thereby losing from 10 to 50% of the marketable value of the cotton so damaged. Therein lies the explanation of the tendency, evident since early in October, of premiums to advance further and of discounts to widen. The supply of medium grade staples, small to begin with, is practically exhausted. Pickings prior to Oct. 1, were of high quality. The unsold supply, embracing many crop lots, consists of high grades held confidently in the belief of higher prices, or of low grades for which there is no present demand and which are saleable only at discounts far in excess of intrinsic differences.

The delta counties of Mississippi have produced close to 1,000,000 bales, although all of it may not be harvested. Arkansas alluvial lands have produced nearly as well. Missouri is producing its largest crop, but much will never be harvested and nearly all is of low grade, owing to the habit of the Missouri farmer, accustomed to livestock and grain, to plant 30 to 40 acres, instead of 10 to 20 acres to the plow, thereby planting and cultivating more than he can find labor to pick. Tennessee has produced a record crop, and Louisiana, a part of which is in Memphis territory, has produced a crop far in excess of any since 1907, and one that approaches the record for the state.

To Dec. 13, Mississippi, Arkansas and Tennessee had ginned 3,507,000 bales, with probably half a million bales remaining to be ginned. Last year the combined total of the three States was 2,559,000 bales, and in 1923 it was only 1,501,600 bales. The three States, to Dec. 13 had ginned 500,000 bales more than the largest crop—2,996,000 bales in 1904—in any previous year.

Staple Scarcity

Of the Mississippi delta crop, say 1,000,000 bales, approximately 850,000 of all grades will run commercial 1⅛ and better, but the supply of 1 3/16 is small, and of anything above full 1 3/16 the supply is almost negligible. Staple has been sacrificed to variety promising quick maturity and to larger outturn compared with given poundage of seed cotton. Staples require a long growing season, which, under boll weevil conditions, makes an extra hazard. Most of the staple varieties require from 1,800 to 2,200 pounds of seed cotton to gin out 500 pounds of lint cotton. Growers say mills are unwilling to pay a premium for full 1 3/16, 1¼ and better lengths to justify the hazard and extra cost of production; as a consequence such lengths are becoming scarcer each year, and may disappear altogether. In the meantime the tendency is toward 1⅛ staple. One variety in particular, producing 1⅛, has become popular throughout this territory. It is of quick growth and is relatively free from mildew and from bollrot; but it exhibits the unfortunate characteristic of opening all at once, and of falling out badly if not picked promptly.

Staple production in 1925-6 crop, throughout the belt probably exceeded 1,500,000 bales, but it may well be doubted that production of medium and better grades was as large as in 1924-25 when total production was probably less than 1,100,000 bales. The crop of 1924-25 was harvested under ideal weather conditions and practically all of it was of medium or better grades. Harvesting weather this year in Memphis territory was never worse, not even during the fall of 1919. An unexpectedly large crop, one that shattered all precedent, coupled with a labor supply barely adequate to the harvesting of a normal crop under normal conditions made matters worse. Mexican laborers were imported by the thousands, but they arrived about the time the rains started and therefore were confronted with conditions disadvantageous, from like causes, to themselves and their employers.

New Crop Enigma

Little is heard about the new crop. Attention is centered on salvaging that which remains in the fields, and getting the old crop marketed. A conference to inaugurate a cotton acreage reduction movement has been called for Feb. 3 at Memphis. So far the movement lacks the backing of factors, bankers, merchants, newspapers and public interest generally which gave the movement of 1921 such success as it had.

The crop of 1925 was due first of all to good seed made possible by favorable harvesting conditions during the fall of 1924. Stands were well nigh perfect. A great increase in acreage was directly attributable to early planting, under favorable conditions, lack of necessity to replant, prolonged favorable conditions which invited more and more planting, and an abundant supply of seed. Poor germination had been so often the rule during several previous years that nearly every grower saved enough seed to plant three or four times.

Seed Scarcity for New Crop

No such satisfactory condition as to seed supply exists this year. Very few growers in this territory saved seed before rains occurred.

Boll weevil is an uncertainty. The idea that the pest has been conquered is untenable. The controlling factor in 1925 was drouth. Some went into hibernation, and a minimum emergence is capable of maximum damage. A wet July and August would invite depredations.

While the crop in central territory was exceptional, and repetition in 1926 is not a reasonable expectation winter rainfall has given Texas good subsoil moisture, which it did not have last year, and which is considered prerequisite to a good crop. Conditions throughout the remainder of the belt are at least as favorable as they were at this time last year.

Expect Acreage Reduction

Summing up, a material reduction in acreage is to be expected from natural causes, delay in harvesting the old crop, disappointment, lack of forward preparation and poor seed, but very little as a result of organized effort.

Since Oct. 1, this has been a season in which it was hard to buy what was sold and hard to sell what was bought. Buyers stocked comparatively little cotton, and were indisposed to enter upon forward commitments, although the volume of such transactions was probably larger than was admitted. A few strong hands have acquired considerable stocks of low grades, against sales to be made in the future, at prices involving little risk, but demand for such purpose seems to have been satisfied. Low grades are freely offered by first hands, but high grades are firmly held.

Shippers and exporters appear to be short in the net, but in comfortable position as to nearby commitments. They have experienced little demand from domestic sources and importers during the last 30 days, and have accepted a small amount of new business. Brisk inquiry has developed recently but it seems to be in the nature of feelers.

Why We Need Cotton Reserve

(*Continued from page 168*)

trade is to remain in its present depressed state, or that America will always be able to spare to us from her home-grown crops all the cotton that we shall require. Apart from the big inroads that the great motoring industry is already making into supplies of the raw material, there are being constantly found more and more uses to which cotton can be put, and Lancashire will be obliged to take more thought in future as to the sources of her raw cotton supply. We know, of course, that her spinning is becoming finer and finer, and that other growths besides the American are being every year more extensively used, but for all that, the time is far distant when we shall have no use for the products of the fields of that great fertile belt lying between the Ohio and the gulf of Mexico.

World's Growing Populations

No one is urging planters to produce more than is required, but in normal times the productions of all the cotton fields in the world will not be more than the trade will be able to absorb, or the wearers of cotton goods can consume. Before the war, it must be remembered, we were working longer hours and adding to the world's equipment something like four million spindles a year, and yet under those conditions we were continually crying out for more and still more cotton. Since that time, and despite the terrible toll of lost manhood in the war, the population of the world has continued to increase, and has increased most in those lands which are beyond all others the recognized cotton-wearing countries of the world. It is calculated that there are now 900,000,000 people included in India, China, Japan and her dependencies.

Consequently, we need not be faint-hearted as to the future when once we leave behind the depressing effects of the Great War. This we are doing very appreciably as the years come round, and, therefore, it would be impossible to lose faith in the future of an industry such as cotton, which has no rival for the purpose of clothing the great bulk of the people of the world. Cotton, far from being played out, will be in greater demand than ever in years to come, and would be in far greater demand to-day if longer views were taken and a less selfish industrial policy adopted than has been done in the past. I have never lost faith in the cotton industry, although one has at times been sorely tried in noting that people engaged in it appear not to see what is to their own interest and advantage. Many of the opinions appearing in the press are those of individuals who have had no experience of the magnitude and importance of an international industry.

Britain Not "Down and Out"

In conclusion, I would like to correct that very foolish impression that has got abroad in America that Great Britain is "Down and Out," and that the old British spirit of initiative and the capacity to battle against difficulties have been lost. I admit that we ourselves are responsible to a great extent for spreading such a notion, for we are at all times too apt to depreciate both ourselves and the industry with which we happen to be connected. As the largest exporting country in the world, we have undoubtedly been hard hit by the depression that has fallen upon so many foreign countries since the war, but that is not to say that we are in the deepest depths of despair and have come to the conclusion that there is no chance of recovery. Let America ask herself one question, and that is: "How many other countries are facing their war debts as England is doing, and how many of them, with burdens nothing like so great as ours, are meeting all their liabilities and putting their affairs on a sound financial footing again?" It is the Englishman's privilege to grumble, often when he has very little to grumble about, but foreign countries should not put down our habit of self-depreciation at its face value. We have had to face exceptional difficulties during the last eleven years, but the national grit which has served us so well in the past is, I think, not likely to desert us now when by far the worst is over.

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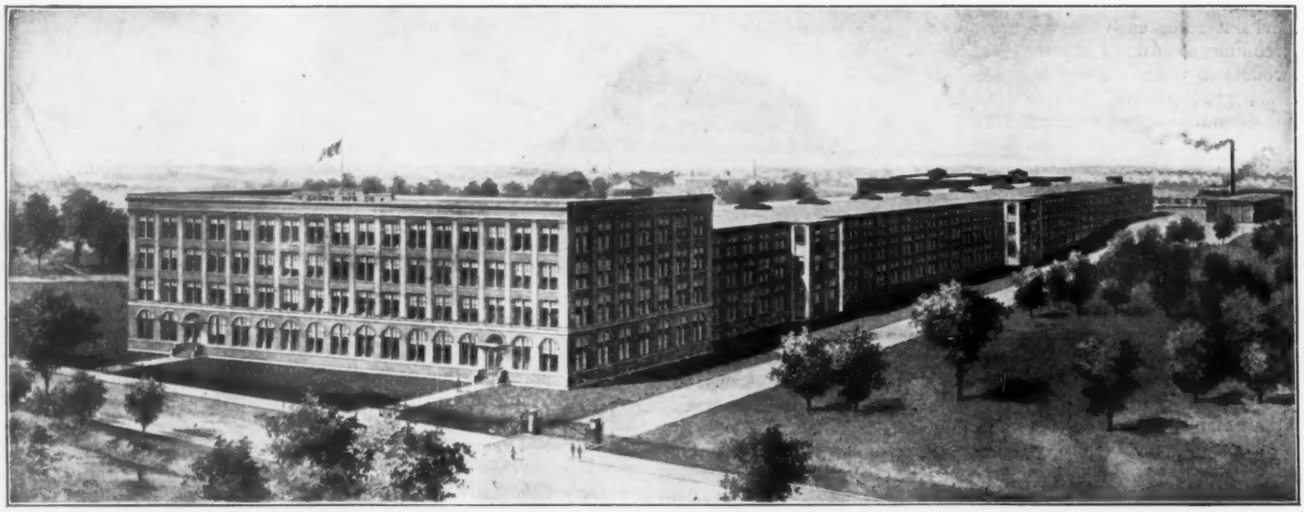

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Men's Wear Improves as Clothiers Work for Sales

New Merchandising Ideas Among Clothiers Will Increase Mills' Volume in 1926—Installment Plan Garment Meets Competition of Radios, Automobiles, Etc.—Worsteds Bound for Greater Prominence—Color Overdone as Style Basis and Another Appeal Is Sought in Fancy Weaves

UNTIL the clothing industry learns how to sell more suits and overcoats to men, wool manufacturers will have to be content with their sub-normal business. The mill may cut profits to the disappearing point and the styler use the finest imagination and judgment, yet if consumers do not take an active interest in buying clothing the piece goods market must proceed in very draggy fashion. The manufacturer of clothing has the advantage that he may enter the retail field and so control his distribution more directly. The manufacturer of fabrics on the other hand has never successfully entered the clothing field and consequently he can do little but let his customers (the clothiers) control the volume of business that comes to him.

It seems reasonable that, with the steadily advancing standards of living in the United States, the desire for good clothing and plenty of it should be on the upturn. Perhaps the future holds this basis for improvement, and the clothing market has merely lagged behind the prosperity in other lines. In bearing this out, a number of manufacturers of the best grades of ready-made garments state their belief that more good grade clothing is going to be sold through 1926 than last year. On the other hand, makers of clothing of the medium and lower grades, recognize a call for the cheapest thing possible in a wearable garment and such manufacturers are laying plans to supply this demand during the coming year.

Installment Plan Retailing

The installment plan method of selling is being applied to men's clothing, and, although few regard it as a sound principle for year in and year out business of the long future, many do think that it will help meet the present problem and result in increased sales this year. Installment plan merchandise is taking a firm grip on the great middle class American home, and if clothing does not come into the game it is likely to be treated with scant attention. Obviously a wage earner who finds 25 or 30% of his weekly income going out to meet installment payments on automobiles, radios, electric home machinery, furniture, etc., cannot easily accumulate the $40 or $50 necessary to buy a garment of fair quality. He is most likely to become a customer of the $22.75 clothing store, and he makes that purchase only when pressed by an absolute need. It occurred to several of the wiser merchants in the medium and higher priced clothing field that they could expand their business best by getting in on the weekly installment budget of the average consumer, and to do this various plans, such as the ten payment plan, have been developed.

Economists in the clothing field have discussed the pros and cons of the installment garment during the last month or two and it is not necessary to repeat these analyses here. Its adoption boils down to a matter of policy and the class of trade sought on the part of the retailer, but if generally put into practice, it will undoubtedly increase the number of units sold by the clothing industry during 1926. The probability that the better grade goods will outwear the cheaper suit which would have been bought instead had the basis been a cash transaction, may mean in the long run a reduction in number of units sold. This phase is worthy of consideration if installment selling of garments grows. The credit side of the situation will receive attention as the plan spreads.

We Have Ahead of Us in Men's Wear—

More prominence to staple worsteds.
Promotion of brown shades.
Increased sales of installment plan clothing to men.
Efforts to put style on basis of stability.
Stimulation of sense of pride in apparel.
Better trade relations.
More business than in 1925.
Doubtful position of raw wool.

We Have Behind Us—

Liquidation of wool values.
Hand-to-mouth operations by clothiers and retailers.
Failure to share prosperity of other industries.
Insufficient business to go around.
Overdoing of color appeal
Rise of cheviots.
Reduction in mill wages of 10%.
Poorest overcoating year in decade.

More Worsteds to be Used

The stage is now set for a return to more general use of conservative forms of worsteds. During the last month or so a greater proportion of the worsted business has been on fabrics of the serge type than for many months. The question whether another cycle of worsted predominence is due, could be answered only by a real prophet, but it is certain that worsteds are going to hold up their end of the argument with woolens better than at any time during the last two years. The extreme styles offered last August for the spring of 1926, seem to mark the high water mark of light colors and eccentric design. Somewhat as a reaction is developing the improved position of cheviots, and, hand in hand with them, is coming the rest of the staple worsted line. The new staples may not be just the same as the old staples, and variations in weave and expansion in the use of mixtures are probable features.

The year begins with greater recognition to brown than at any time in 1925. Early in that year, any brown was unsalable. The so-called wood browns, such as cinnamon, nutmeg, etc., which had their rise in exclusive circles last fall, are going forward to more popular development.

Hope for Style Stability

Greater confidence in style stability should be evident as the year advances because of the staple trend and the revulsion from eccentric patterns and colors. Conservative garments have the call at the moment and the American man seems willing to accept jazz in all forms except in his clothing. Stimulation of a greater sense of pride in apparel is the aim of a campaign now being developed by clothiers. The wisest merchants in this field are optimistic that proper advertising will instill in the average American mind a new sense of clothes consciousness which will be reflected in better clothing business before 1926 ends.

Last year ended with a generally healthy situation regarding stocks. Retailers had bought chiefly against definite requirements and there was no evidence of burdensome oversupplies. Clothiers in anticipation of rather narrow business, played the same game themselves and ordered their goods from mills as near as practicable to the time when they were needed for use. In the last quarter of the year representative clothiers reported that retail collections were good, and they believed that this was due to the carrying of low stocks and the quicker turnover. October was reported to be the best retail month for the year.

Clothiers Try Short Cuts

Last year brought into prominence several short cuts in the selling of clothing which were the direct result of the consumer's interest in cheap garments. In some of the large centers of population, the direct-to-the-consumer clothing manufacturer made considerable headway. Chain store selling was successful and the manufacturing retailer who offers garments at one price throughout his store came into the forefront. The last named class of sellers who offer everything from golf suits to tuxedos at $22.75 per suit are taking the place in the metropolitan trade which the one-flight-up retailers held not so long ago. The offering of really good cheap clothing would stimulate the lower end of the market, just as plans for installment selling are expected to move more of the higher priced lines. It has been suggested that clothiers who put a really fair quality of cloth into a cheap cut-make-and-trim job will build up a greater body of regular trade and do a greater repeat business than those who make the garment cheap from start to finish.

Raw Wool Came Down

Raw wool played an important part in the fabric market and its break from the high levels at which 1925 began, was responsible for much of the sluggishness in fabrics encountered through the first half of the year. The high point for the year came at the beginning, and the low point was recorded in May. A recovery through July and early August aided in starting the spring 1926 season on a firm footing. A rise in October and November, followed by easing off in December, rounded out the year. Raw wool at the close was 20 to 25% under the basis at the start of the year.

The opening of fall, 1925, goods which was initiated during the first week of last February found woolen suitings advanced 10 to 15% over the year before, overcoatings advanced 10 to 17% and worsteds 5 to 10%. Though these were sharp advances, even higher prices had been expected because of the great strength of wool at the close of 1924. Words of warning uttered at that time bore early fruit, and March and April witnessed a return of wool prices to

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those current in the summer of 1924.

The Cheviot Craze

Cheviots were given an important place at the fall opening and prices of representative lines ranged from $1.75 to $3.40. It will be remembered that many of the orders placed were later cancelled by buyers during the late spring. But these same buyers were in the market in September, anxious to effect a reinstatement of their original orders for cheviots. This was acceded to by mills in some cases only if higher prices were paid and a large business in cheviots was done.

The first half of the year saw chief interest in soft faced fabrics. Goods of the cassimere type carried the popular colors such as fawn, blue-gray, lavender, etc., with greater effectiveness than the hard-faced fabrics, and for that reason, as well as for the fact that they were cheaper, they became market leaders. Initial business for fall, 1925, was extremely disappointing in total, and many mills ran part time or shut down during the spring and summer.

Color was Over-Stressed

Leading up to the spring opening at the end of July market discussion was to the effect that color was style, that style sold goods and that therefore color was to be the keynote of the new season. Blue-greens were introduced in addition to fawns, grays, yellows, lavenders, etc. Gray and tan flannels for separate trousers competed with white flannels. As a result of over-stressing color, the peak of its usefulness appears past, and stylers are feeling about for other features on which fabric vogues may hang. Small and neat geometric patterns in the form of diamonds, squares, diagonals, etc., is one of the substitutes which 1926 may develop.

Tropicals Firmly Entrenched

The opening of tropical worsteds began late in June. Many lines were unchanged in price from the year previous, and the early business was most encouraging. The season then current was unexpectedly strong at retail, with distributors unable to meet last minute demand because neither mills nor clothiers had made up anything in excess of orders actually on hand. This mid-summer season is firmly entrenched in the market, and it now involves the higher priced worsteds as well as the cheaper combination fabrics.

Spring lines when opened in August showed reductions from the year before of 2½ to 10% on staple worsteds, about 5% on fancy worsteds, while woolen fabrics were about unchanged. The reduction of mill wages of 10%, which went into effect in New England during August and September, were said to mean not more than 5c per yard on goods, although buyers at first argued that the change should have meant something more in their pockets. The season developed an enormous call for reference samples and a very distinct gain in business placed on worsteds which were advanced 5 to 15c per yard in October.

Flat Overcoating Season

The year as a whole was exceptionally poor in the overcoating field. Retailers were credited with large stocks at the beginning of the year and clothiers bought very little until past the middle of the summer. Shirtings and mackinaws opened for the coming fall last October and because of their extensive sport wear use, have been doing a good business. Last minute overcoating orders were largely for staple shades, though the prospect for the new year favors moderately light colors in fall overcoatings despite belief in the general wearing of the darker colors in suits.

Trying to Apply Costly Lessons in Women's Wear

By Cooperation Trade Abuses May Be Laid in Discard—Mills Must Adapt Themselves to Hand-to-Mouth Buying—Rayon Mixtures Likely to Grow—Serviceability a Style Requisite—Staple Worsted Mills Turn to Fancies—Profit Margins Slight

A YEAR of hard work, inadequate returns and uncertainty has been left behind in the market for women's wear wool goods, and the lessons learned, if properly applied, will point the way toward more profitable operation in 1926. A number of new efforts toward cooperative cure of market abuses are being put into action and although buyers and sellers are not in too amicable a mood, due to the ups and downs of several poor seasons, still the element of self-interest counsels them to work together for the common good. Some few fabric houses may be named which have been doing fairly well, and their prospects for the new year are bright. However, the time has not yet come when there is more than enough business to go around, so that even in 1926 there is likely to be a considerable fringe of producers among whom orders will be scarce and whose potential competition will act as a restraint on possible elevation of prices.

Cooperate for Betterment

If better trade conditions can be developed as the result of cooperation the slack seasons lately experienced will have borne good fruit. Actual prosperity seems just over the threshhold, and it may be brought in if merchants are capable of finding the right bait. All business reports at the beginning of the new year stressed this country's industrial prosperity and it will be exceptional if the increased earning power of the people is not reflected in greater variety and luxury in women's raiment.

In this connection the success of silk goods during the last twelve months and their probable continued leadership in the dress field through 1926, may be partly explained. When the serge dress passed out of the average woman's wardrobe, it was not replaced in every instance by garments of worsted construction. The wearing of silk, however, has expanded rapidly into the field of every day wear. Worsted manufacturers are now meeting this competition directly by the production of very sheer, soft and semi-lustrous fabrics, done in colors which suggest the silk mode. Many of these fine worsted creations are more expensive than the popular silk lines, and, as a result, are not candidates for a large volume business. If the large producing units can adapt this style of fabric to their looms and make their offerings at low figures, there may be a very definite revival of popular priced worsted dresses.

Hand-to-Mouth Buying

Convention halls and the pages of trade journals have been filled during the last twelve months with discussions of buyers' hand-to-mouth policy and what can be done about it. Styles have been changing so quickly that garment makers have refused to gamble and the tendency has been for them to buy small quantities to cover actual needs very close to the time when those needs arose. The fact that this policy was successful in carrying garment makers through several dull seasons makes it likely that it will not be abandoned, and that mills will have to adapt themselves to this scheme of things through 1926.

More Rayon in Mixtures

More rayon will be used in women's wear fabrics this year in the form of mixtures than heretofore. Many attractive lines of this class have been prepared for spring and the two-toned effect is especially suitable for the pastel shades which have been revived as style leaders, with a grayish or "mother of pearl" cast. Rayon decorations, used to carry color and luster through a somber ground, are less likely to be a permanent feature of the market. They have been exploited for spring and will probably sell fairly well on the cheaper end of the line, as nothing approaching them has previously been offered at a popular price. Among the higher priced goods where style inspiration has its source, this type of effect has little recognition and merchants believe that the field for rayon decoration is therefore limited.

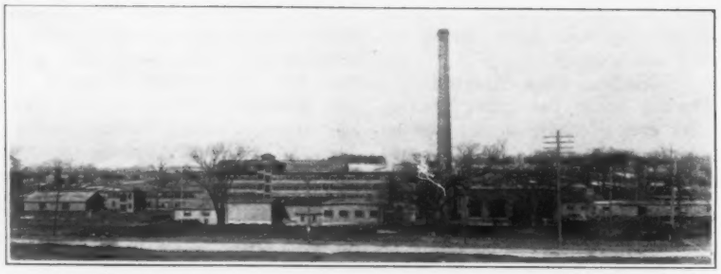
The tendency among newer fabrics is to make service a definite requisite to good style, and fancy fabrics which lack real suitability for the purpose to which they are to be put, are not likely to get far. The bolivia type of coating with close and lustrous pile has returned for another session after a season in which there was general

The Women's Wear Future Holds—

Better business ethics in the trade.
Good sale for new and original productions.
Competition with silk still a factor in dress fabrics.
Continuation of buyer's hand-to-mouth policy.
More rayon in mixtures; less as decorations.
Serviceability a style requisite.
New delicacy in sport fabrics.
Sheen twills to the fore.
Establishment of new type of light weight coat.

The Past Held—

Insufficient orders.
Late seasons.
Failure to recognize leading styles till retail season began.
Corded effects take lead from twills.
Staple worsted mills relinquish old lines for fancies.
Flannel vogue of fall 1924 overdone.
Maintenance of bolivia type coating.
Profit margins reduced to disappearing point.



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doubt as to what sort of coatings would prove leaders. The covert and rep are well established for many uses including a new vogue for light weight spring coats as well as for the more customary use in suits and dresses. These are instances of successes of really practical fabrics.

Delicacy in Sport Fabrics

Sport fabrics for 1926 show a trend toward greater delicacy of construction and color. There has been something of a vogue for mannish tweeds and worsteds, but a number of the more successful tweed lines have exhibited quite different characteristics, the admixture of rayon waste giving these tweeds a distinctly feminine appeal. Fluffy coatings in pure white are on the program for spring and summer out-of-door use. The effect of the knitted balbriggan, which was a popular dress material last fall, has been duplicated in woven goods and the promoters of these lines are most optimistic as to their success.

Although prices must follow any pronounced movement of raw wool, the prospect is that any upturn, if such develops, will be proportionately small. Actual prices are of less importance in women's wear than in the men's wear field, but competition is likely to be such as to hold all fabrics in the wool goods field down to a very close margin over cost. While raw wool may gather strength as the year progresses, the majority opinion is opposed to any rise during the first six months of the year and many believe that an easier trend will be the rule through the spring. A low priced, yet fairly stable, raw material market would be the ideal foundation upon which better business in women's wear may be based.

Seek Sanctity of Contract

The uncertainty of contract relations during 1925 was such a disturbing factor that many efforts are now being made to achieve a surer foundation. Cancellations and unwarranted return of merchandise have been thorns in the side of merchants in all branches of business. The garment maker experiences this treatment from the retailer and in turn inflicts it upon the mill. The least that mill men have a right to hope for as the result of buyers' hand-to-mouth operation is the assurance that when orders are placed they are final. No speculative buying is in prospect for the new year, and it would clearly be the greatest aid to the trade to have buyers realize and take the responsibility for their fabric commitments. The actual losses resulting from these trade abuses are brought to bear upon those who do not deserve them, and, in the large, they make up an extra cost of doing business which the industry must lay aside together with other inefficiencies of days that are past.

Late Start to Seasons

It was characteristic of the various seasons last year that all were late in getting under way. The leading styles were not recognized as leaders until the period of retail distribution had started and as a result there developed a last minute pinch on certain limited lines. At that time there was never enough of the wanted fabric or color to go around, while other classes of goods went begging and were virtually unsalable. Through the early part of 1925 many bright colors were in vogue, and the pansy purple which was promoted by fashion authorities for fall caught the public eye in the spring and was pushed into immediate use. All sorts of fabrics were utilized in this color and the vogue helped those who were able to make deliveries in time to do a considerable business.

The rise of subtle pastel tints for the coming year is in part a reaction from the brilliant and decided colors which had the call during a large part of 1925. In the last half of last year the "Bois de Rose" shades were developed, which, together with a number of new gray tones, are continuing over into the present year. Vivid effects will be found in 1926 chiefly in the realm of sports wear.

Corded effects such as are found in reps and poplins came into leadership last year after efforts for several preceding seasons to make them large sellers. The big staple worsted mills of the industry found it was necessary to relinquish their old set lines, and storm serges almost passed out of existence. In their place these big producing units turned to fine twills, flannels, reps, etc., many lines showing extensive use of rayon and other fancy effects. The flannel vogue gave evidence of being overdone early last year and cancellations and cut price selling resulted. Only among the market's established flannel producers have these goods remained persistent sellers through the last few months.

Bolivia Type Maintained

Efforts to turn public attention from coatings of the bolivia type gave evidence of a failure last year, and the fabric was revived in prominent quarters with a semi-lustrous close pile as the new feature. Highest priced lines used cashmere wool for the face while the popular priced numbers succeeded in producing similar effects with rayon mixtures. Some criticism of the latter has resulted because of the tendency of the goods to crush too readily and to show spots. Their luxurious effect, however, has not yet been duplicated at the price without the use of rayon, and the problem thus remains to overcome these difficulties rather than to substitute other fibres.

The fall season brought scant business to many mills and a number of women's wear factors turned seriously to men's wear production in the hope of running their mills. Cheviots which held a fair position in women's wear, were very popular in men's wear and several mills took advantage of this to increase their business.

Printed wool goods, though produced by only a few houses, had fair success, particularly in bordered designs similar to the 54-inch bordered silks which had been popular for several seasons. Efforts were made by a number of mills to enter the printed goods field, but the demand did not seem sufficient to support more than a limited production. Printed flannels and printed wool taffeta were the leading numbers. In small printed patterns considerable business was done for juvenile dress.

The women's wear field made general complaint that there was no tangible fall season last year despite considerable last demand for coatings and dress fabrics in lip-stick red and grackle-head blue. There was a limited movement of large plaids in heavy woolen coatings and some interest in broadcloth for various uses. Expectancy is current that the vogue for light-weight coats this spring will move a considerable yardage of goods. The general use of silk dresses and very sheer worsteds in addition to style's mandates will probably make the wearing of light-weight coats quite general until really warm weather sets in. Another probability is for the wider use of suits in the women's apparel field.

British Wool Trade More Hopeful

Unexpected Slump Causes Disastrous Losses in 1925—Confidence Renewed Late in Year

From Our Bradford, Eng., Correspondent

IN the United Kingdom, as in many other wool-consuming countries, the year 1925 confounded the prophets. Towards the end of 1924 there was almost universal confidence in the general soundness of the position, and importers backed their opinions by heavy purchases at record prices in Australia. The most extreme pessimists (of whom there were very few) did not go further than a warning that prices were too high and that some adjustment in merinos was needed. Yet within a period of little more than four months values had slumped 40%, involving the industry in exceptionally heavy losses.

The doyen of the Bradford trade, Lord Barnby, has declared that though he has again and again analyzed the causes which prompted optimism towards the end of last year, he can find no real flaw in the reasoning and no grounds for self-condemnation. In similar circumstances his actions would be the same. Other traders have attributed their bad judgment to a lack of statistical knowledge, and one good result of the slump has been the fillip it has given to the campaign for better and completer statistics.

Causes of the Slump

The fundamental factors in the situation, judged in the light of subsequent events, would appear to be as follows: In autumn of 1924, the shortage of wool so often predicted by Sir Arthur Goldfinch was actually in being. The inconvenient lightness of stocks at the consuming centers convinced the skeptics, and Bradford was compelled to buy heavily at the opening sales in order to meet actual machinery requirements. A spirit of optimism was generated. Prices, though somewhat elevated, did not seem to be higher than the shortage warranted. Manufacturers complained bitterly that in the past they had been kept going solely by giving their customers the benefit of cheap purchases, and that they could not pass on the advanced prices. But they had so often cried wolf in former years that their plaint went unheeded.

A falling-off in Continental competition for wool, and the covering of urgent requirements by users, turned a shortage of wool into a temporary surfeit. The high prices paid for the early wool had absorbed an undue proportion of the credits commanded by Bradford buyers, and when the fall commenced there were no reserves to stem the decline. Manufacturers, who found the high prices impossible, were no better circumstanced when prices fell, because buyers held off and every section of the industry lived on its stocks. The turnover in yarns, tops, and wool was progressively smaller than the actual consumption. Bradford importers and topmakers lost huge sums of money. Much of the trade is financed by the banks to the extent of 75%; but the rapid slump threatened to rob them of a portion of their security, and forced realizations took place. In previous years it had been possible to make ends meet by giving customers the benefit of earlier and cheaper purchases of wool, tops, or yarns. A falling market reversed the conditions; and topmakers, spinners, and manufacturers were compelled to sacrifice profits and incur losses in the endeavor to keep machinery employed.

Turn in the Tide

The turn of the tide came about August. The position in the United Kingdom was to some extent alleviated because the strike of wool textile operatives curtailed production and created a partial vacuum. Meanwhile business in France improved under the stimulus of renewed inflation, and strong competition from this quarter led to a quick clearance of the carry-over in Australia at stiffening prices.

In September and October there was a marked improvement in business at Bradford, and large weights of tops, yarns, and piece goods changed hands. Users had reached the point

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when stocks had become exhausted, and a substantial recovery in the demand for fully-manufactured goods found the trade uncomfortably short of wool. Conditions were acute for a time, and sorters and combers were unemployed, and deliveries of tops and yarns on contracts delayed, through sheer lack of raw material supplies. Spot wool commanded a premium of as much as 10% over corresponding qualities in the primary markets. This premium naturally vanished towards the end of the year, when urgent needs became satisfied.

On the whole machinery has been very poorly employed during the year. The average percentage of unemployment has been nearly 15%, compared with 7% in 1924. The ups and downs of the trade are well shown by the following record of the percentages of unemployment at the end of the months shown:

PERCENTAGE OF UNEMPLOYMENT

End of	Woolen & Worsted %	Hosiery %	Carpet %
Dec., 1921....	15.5	4.8	10.6
Oct., 1922.....	3.4	1.8	3.4
Nov., 1923....	11.1	8.7	5.3
May, 1924.....	4.7	5.0	5.0
June, 1925....	19.7	9.4	10.6
Nov., 1925....	9.6	6.1	9.2

The improvement since June has been mainly in the worsted section, and particularly the worsted spinning section. Unemployment in the worsted weaving section in November had been reduced to negligible proportions (though this was to a large extent due to the shortage of weavers); while on the other hand there was still a large amount of unemployment in the woolen industry, where the lack of normal business with the Far East and Australia was severely felt.

Wool Retained

The quantity of virgin wool (excluding wool from sheepskins) retained in the United Kingdom during 1925 was much below normal. The following table shows the position:

WOOL MOVEMENTS

In mill. lb.	1925	1924	1913
Imports	711	760..	801
Re-exports	335	359	307
Retained	376	401	494
British clip retained..	58	53	95
Reduction in Bawra stock	....	70	....
Total retained ...	434	524	589

In 1925, as in 1924, it is probable that the actual machinery consumption was larger than the amount retained, owing to stock reduction; but in any case the quantity of virgin wool consumed was some 20% to 25% below the 1913 quantity. The amount of reworked wool used showed a still greater decline; actual figures are not available.

The Export Trade

The export trade of the United Kingdom accounts for more than half the total production of the industry, and consequently alterations in its magnitude are of great importance. The demand for semi-manufactures abroad dwindled in the same way as it did at home, through restricted consumption and the policy of stock reduction. A vital factor in fully-manufactured goods was the decline in trade with China and Japan. In 1924 shipments to these two markets were no less than 67,000,000 sq. yds. out of a total of 221,000,000 sq. yds. In 1925 the quantity dropped to 41,000,000 sq. yds., a decline of 26,000,000 sq. yds. Japanese trade was curtailed by various conditions, notably the depreciation of the yen; while political upheavals in China had an adverse influence. Two other important markets showed substantial declines—Canada (which took 6,000,000 sq. yds. less) and Australia (3,500,000 sq. yds. less).

The following statement shows the salient features of the export trade, the figures for 1925 being for the twelve months ending November:

Exports of:	1925	1924	1913
Tops:			
Total, mill. lb.....	32	41	43½
Germany, mill. lb.....	8	10	16¾
Worsted Yarns:			
Total, mill. lb.....	40	45	50
Germany, mill. lb.....	21	22	29½
Worsted Tissues:			
Total, mill. sq. yds...	48	57	81
Far East mill. sq. yds.	9½	14	10
Woolen Tissues:			
Total mill. sq. yds....	136	165	154
Far East mill. sq. yds.	31½	53	21

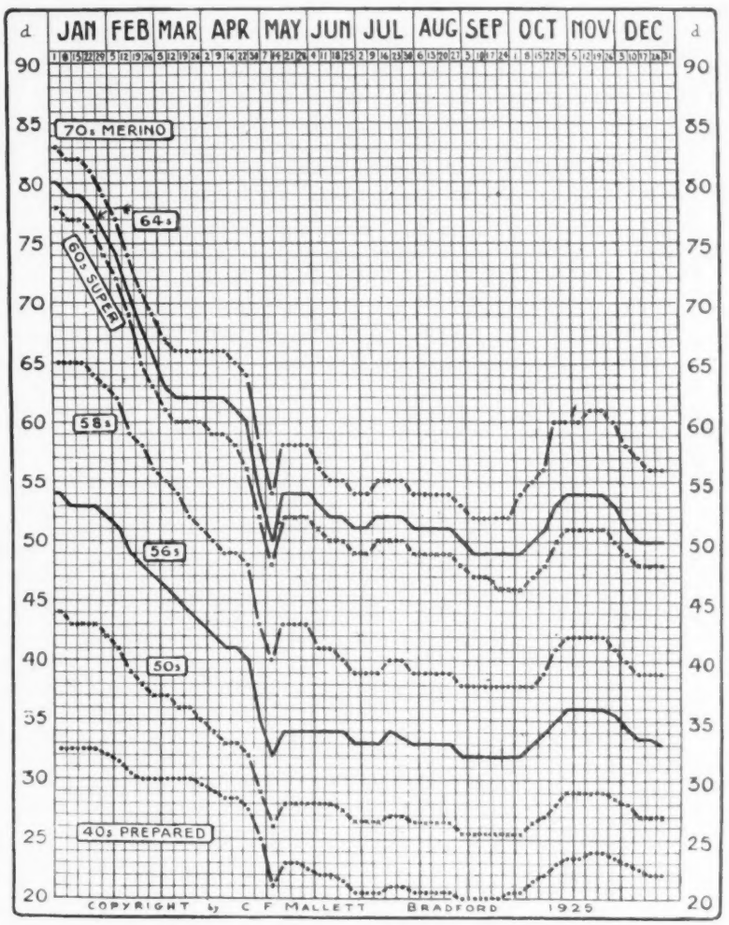
Imports of woolen and worsted tissues (mainly from France) showed only a very slight increase until towards the end of the year, when the threat of safeguarding duties caused accelerated shipments. The total imports were about 35,000,000 sq. yds., compared with 29,000,000 sq. yds. in 1924 and about 80,000,000 sq. yds. in 1913.

The Price Position

The position of wool prices is shown in the following table of Kreglinger & Fernau's London values (combing fleece wool, first cost, clean, London, without oil):

Per lb.	July 1914 d.	Dec. 1923 d.	Dec. 1924 d.	Dec. 1925 d.
70s super.....	32	68	85	61
64/67s good medium	30½	63	77	50
60/64s good medium	30	57	71	45
56s fine crossbred..	26	44	57	30
46s crossbred.....	17	23	35	20
36/40s crossbred...	15¼	17	30	17

The premium on fineness is shown by the fact that 70s wool is 91% dearer than in 1914, while 36/40s wool is only 10% dearer. Compared with a year ago, merinos are 30 to 35% and crossbreds 40 to 45% cheaper.



Average Prices of Tops at Bradford, England, During 1925

The following table shows a few prices of representative qualities of yarns:

Shillings and pence per lb.	July, 1914 s. d.	Dec., 1923 s. d.	Dec., 1924 s. d.	Dec. 1925 s. d.
2/48's Botany (64's)....	3/ 3	6/7 ½	7/10½	5/8
2/40's (56's).....	2/10¼	4/ 9	5/7¼	3/11
2/32's worsted medium..	1/10	3/—	4/	2/11
2/16's worsted medium..	1/ 8	2/ 6	3/ 3	2/3½

Prices have receded to a level lower than that prevailing at the end of 1923.

The Piece Goods Trade

On the whole it has been a very unsatisfactory year for manufacturers, with a welcome improvement in the last three months of the year. In men's wear, worsteds have at last gained ground at the expense of woolens. Fine worsteds have been in steady demand, and in European markets have supplanted tweeds to some extent. Herringbone twills and intricate designs have been wanted. Plum has been the fashionable color. Recently plain solid worsteds have come into favor. Dress suitings have sold rather better than the previous year. Overcoating trade has been stimulated by the cold weather and colorings have been lighter than usual. Scotch tweeds have sold very well, especially abroad, and the exceptional variety of goods produced in Scotland has commanded much attention in all markets. Dewsbury and Batley have been severely hit by the drop in trade with the Far East, which accounted for half and even three-quarters of the total turnover of many firms in the previous year. Velours have still been in demand, and it has been a good year for ladies' mantlings in green, brown, and tan shades. The Bradford dress goods trade, after a quiet period, came into its own late in the year, when a satisfactory turnover was accomplished, despite heavy imports from France. Reps, poplins, and marocains have been the popular lines.

Margins throughout the year have been unsatisfactory, but with cheaper wool, and with the demand for fully-manufactured goods more in harmony with the demand for raw material, the position is a good deal healthier than it was when the market was forced by repeated rises in wool values.

Outlook for 1926

The slump has made it clear that the fundamental position of supply and demand is unchanged. Despite the depression, there was no real accumulation of stocks. The surplus wool in Australia, South America, and South Africa was balanced by the abnormal lightening of stocks at the consuming centers. This was demonstrated by the acute shortage which developed in September and October, and by the fact that the carry-over was easily absorbed. It seems clear that moderately good trade is quite sufficient to absorb the world's wool production. There is no danger of accumulation; on the contrary, a good year might lead to tightness at the end of the season.

The strength of the present situation lies in the fact that stocks of wool are light and values are eminently reasonable. At the close of the last London Sales of the year, crossbred wool could be bought at under 20% advance on the prices ruling just before the war, and even merinos were only from 40 to 65% higher. By contrast, raw materials generally in this country are 65% above the pre-war level. The cheapness of wool should help to stimulate the demand for wool products and eke out inadequate purchasing power.

There are difficulties yet to be solved in Europe which prevent undue optimism. Germany is exceedingly short of liquid capital, and is finding it hard to finance purchases of tops and yarns from Bradford, while her costs of production do not give her an ad-

vantage as an exporter. Recovery is likely to be slow. France is not yet within sight of solving her financial difficulties, and though renewed inflation might lead to a final bout of feverish activity, the day of reckoning must come, and sooner or later the stabilization of the franc will have somewhat similar effects to those which have been observed in Germany.

On the other hand, there appears to be good reason for believing that Great Britain's financial policy is at last bringing its reward, and that though the general pool of trade may be reduced by the difficulties on the Continent, this country stands to gain a rather larger share of the total turnover than she has been able to do in the past, when other countries have had the advantage of depreciating currencies. The period of depression has stimulated British manufacturers into producing novel designs and finishes which are commanding a great deal of attention. In fact, during recent months there has been a general chorus of approval of British products abroad, and an equally vociferous chorus of complaints from domestic manufacturers in various countries with regard to the undue prominence accorded to British goods. The revival in the home trade is partly due to the accumulation of long-deferred needs, and must not be given too much emphasis. There can be no permanent recovery of trade in the home market until other industries are able to give better employment than is now the case; and the lost ground is being regained only slowly.

There is no gainsaying that a spirit of optimism is abroad in the United Kingdom at the time of writing, but probably this confidence is somewhat overdone, as it was a year ago. There are vital differences, however, compared with the position at the end of 1924. The industry is basing its operations on raw material which can only be regarded as cheap and likely to appreciate; the medicine of the gold standard has been swallowed; conditions seem to be making for a slow general improvement in demand at home; and though financial difficulties on the Continent may reduce the general turnover abroad and in particular affect the demand for tops and yarns, it seems likely that Great Britain will obtain a somewhat larger share of the trade than has been the case in recent years. One does not expect to see any further dwindling in the shipments to the Far East, and some recovery in this important market is hoped for during the coming year.

Close Buying in Carpet Trade

Hand-to-Mouth Operations of Distributors Maintains Constant Need for Goods

THE year just passed has been an interesting one in the development of the carpet industry. It marks considerable progress in the extension of buyers' hand-to-month operation. The jobber who formerly carried a large stock, acting as a great reservoir between manufacturer and retailer, seems to have reversed his tactics and now carries only enough goods to care for current needs, filling in from time to time as retail demand shows him to be necessary.

Years past manufacturers could depend upon disposing of approximately 75% of their season's production at the time their new lines were opened, leaving about 25% to be sold on the road by their salesmen or selling agents. This allowed the mill to lay out production schedules, apportioning certain work to each set of looms, by which the overhead of a carpet mill is kept within profitable limits. It is now necessary to take looms off one pattern and then in a few days, with the reception of another small order for the same pattern the looms must be rearranged.

At present the ratio of orders received at the openings is practically reversed, manufacturers stating they now receive approximately 25% of their orders at the time of the openings, leaving 75% to be booked by salesmen on the road, this ratio holding irrespective of the size of the entire season's business. It has been estimated that the season ending last November represented a 60% season for carpet and rug manufacturers. It is as yet impossible to forecast how this will compare with the current season which ends next spring, basic conditions leading a majority to predict an improvement over this figure for this season and a further increase for the spring and summer season.

All Stocks Low

Probably the most promising feature at present is the fact that stocks, from manufacturers down to retailers, are low and a steady, although small, replacement of depleted lines is anticipated by manufacturers in a short time. It also indicates that a larger buying movement which the trade believes will become more noticeable during the balance of this season and will continue through the next, will be felt by mills more quickly than heretofore. One trend manufacturers have found recently has been the demand for small rugs, that is smaller than what is termed room size. At present no particular line is in more active demand than others, both worsted and woolen qualities moving in small quantities.

Probability that new home building will be continued on a high plane through the first six months of the new year means that demand should remain fairly constant. Mills must continue to benefit promptly from this demand since neither jobbers nor retailers appear to have stocks which would last any time under average conditions.

The year's sales probably marked a peak in the popularity of axminsters. This class of goods was followed closely by an excellent demand for velvets and tapestries. Wiltons were inclined to be sluggish. An interesting trend among some decorators is reported to be the more general use of carpetings in place of rugs. In many new apartment buildings and hotels, carpetings are now being used where rugs had been considered the only thing not more than a year ago. The competition of felt base floor coverings and fibre rugs was felt somewhat through the year in that class of trade which is limited to low price ranges.

No drastic changes in prices are indicated in the near future according to a number of leading manufacturers and spinners, all of whom believe values of yarns and goods to be on a fairly stable basis and they give this as a reason for greater confidence in the trade, especially among retailers. This is desirable from a manufacturer's standpoint, permitting them to book orders in larger quantity and farther ahead, reducing their overhead costs greatly as against conditions such as have recently obtained, when small lots covering a wide range of patterns were ordered frequently, raising manufacturer's costs to high levels. Manufacturers in turn are reported by spinners to look upon current yarn prices with more confidence than heretofore.

Price Movement Small

There has been no drastic lowering of yarn prices during recent months, although spinners have shaded quotations to a certain extent. In worsted qualities one of the most important spinners states they are asking 97½c for 3-2-16s which compares with $1.00 to $1.05, the latter figure representing the highest point reached, the bulk of business being placed no higher than $1.00, representing a decline of 2½c. Slightly larger declines have occurred in woolen qualities, 72 yd. three-ply, being quoted at 78c in many instances which compares with 85c asked several months ago. Spinners assert the outlook is promising as manufacturers, in many cases, are asking that their new commitments, which have been small in size, be delivered in part by express.

The year in the carpet wool industry has been a constant battle for lower prices on the part of buyers and for higher ones on the part of sellers. Wool importers recognize that too high a price on carpet wools must materially restrict the demand for carpets, but they point out that it is equally true that too low a price will not bring out the wool in the remote foreign centers where it is grown. In 1925 the peak price came in February and March and resulted in fairly large importations. Through the spring and summer carpet mills bought with extreme caution and wools declined. They remained, however, on a level above previous years and at a point unsatisfactory to the average carpet mill. At about the time of the new spring opening of carpets, wools eased off a little more, giving manufacturers an opportunity to name attractive prices on their products and to buy a little more wool.

Some wool dealers believe there are larger stocks in the interior of China which may come into the market in the near future; others deny the existence of large stocks and assert the possibility of these wools coming to this country in volume in the near future is doubtful in view of the internal situation in China. It has been estimated 19,000,000 lbs. of carpet wools were held at the end of 1925 comparing with 7,000,000 lbs. at the end of the previous year. While this represents a decided increase, the amount now held is not excessive should more active demand occur.

Installment Plan Spreads

The extension of the partial payment or installment plan of retailing into many organizations which formerly did only a cash or charge business is in harmony with the growth in this method of distributing the burden of household expense over a period of months, and undoubtedly has resulted in maintenance of the large volume of business done in the carpet field. The fact that a good rug may be in service in a household over a long period of time seems to warrent the application of the installment plan to its sale. Merchants in the carpet trade believe that this movement will work to increase the annual volume of business through coming years.

The colors which came into prominence during the year are tans, grays and taupe. During most recent months the deeper tones of plum have been attracting considerable attention. The paler orchid hue has developed pronounced popularity in the far west, particularly California. The Chinese blue, the red and the green of yesteryears still sell, but in reduced quantities.

Pattern Trends

There is an interesting change in the pattern layout of most popular rugs. The old fashioned center medallion about which the design was built up, seems to be passing, and the designs now considered in best taste are those with decorated corners and practically plain centers, or, as an alternate, an open design which does little to obscure the general effect of the plain background. The psychological reason advanced for this change in pattern is the belief that small rooms, of which there are so many in modern homes, look larger when carpeted with a rug carrying its decoration near its borders and with plain center, than they do when the former type of rug with pattern massed in the middle, is used. Persian designs are holding a high place in the industry and the newest element is said to be the successful introduction of Spanish motifs.

Last year witnessed two auctions by the Alexander Smith & Sons Carpet Co. In each case the drawing together of the buyers in New York worked for the benefit of the trade

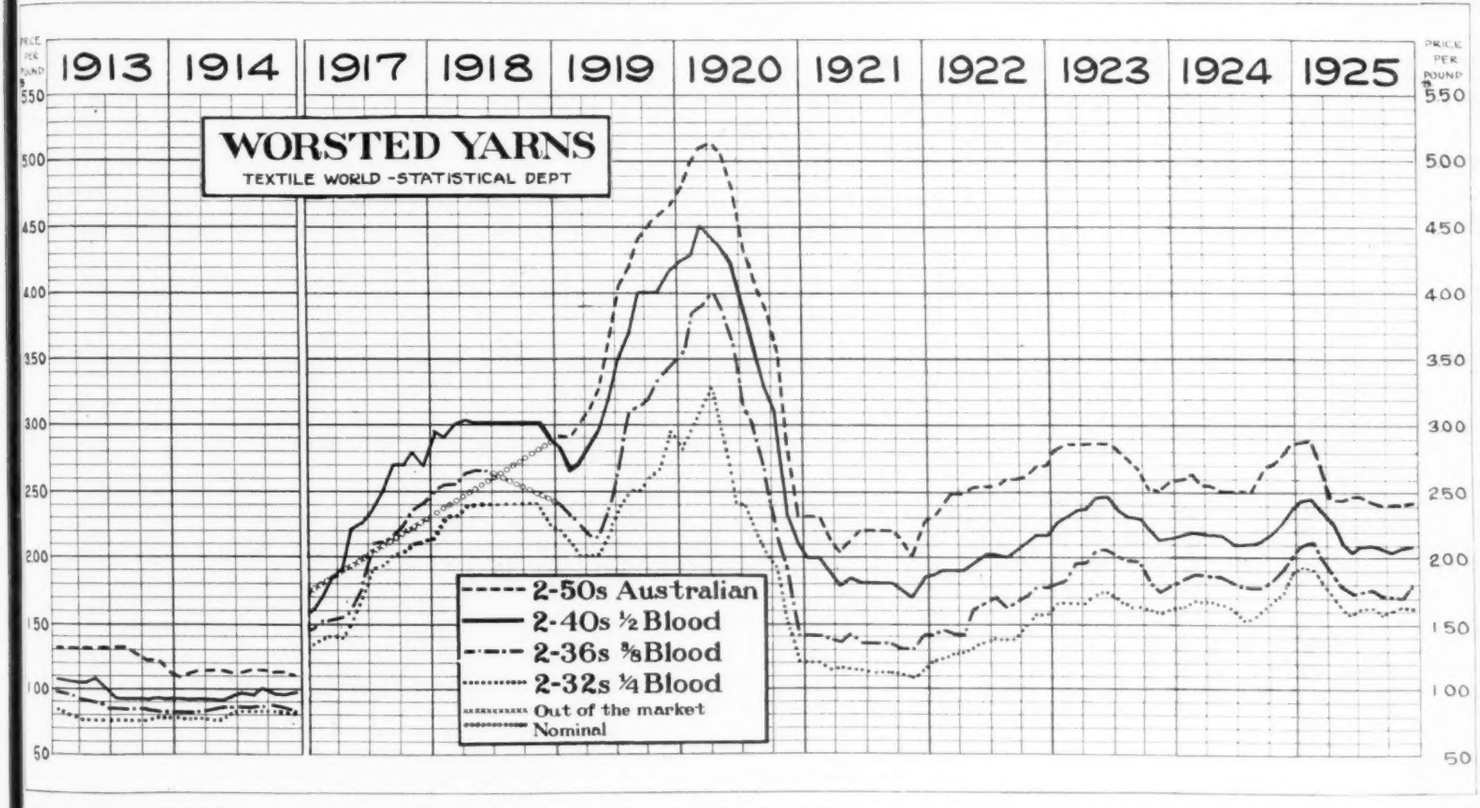
Lower Wool Prices Improve Worsted Yarn Outlook

Yarns Cheaper Than Year Ago—Worsted Men's Wear Demand a Promising Factor—Look for Continued Popularity of Cheviots—Small Stocks Now Held Indicate a Freer Movement from Spinner to Manufacturer—Quotations More Stable

THE beginning of the new year found a trend in evidence, for which worsted yarn spinners had been eagerly awaiting for the last three years. This tendency became apparent early in the fall and indications point to a further move in this direction during the present year—a return of worsteds to popular favor. It was noticeable in the yarn market by a brisk demand for quarter and three eighths yarns, in counts ranging from 20s to 40s, in the gray, used in piece dyed fabrics— a section of the goods based is the comparative smallness of stocks of yarns not only in spinners' possession but also those held by jobbers, dealers and manufacturers. It has been the general policy followed throughout the year, this branch of the industry having taken a rather severe lesson upon the wisdom of speculating in its raw material under unfavorable circumstances in 1924 and this lesson will not soon be forgotten. At that time stocks were larger along the entire line from spinners to manufacturers and speculative buying far ahead was quoting Bradford spun yarns on the basis of $1.85 to $1.95 for 2-32s quarter blood, or 25c to 30c above quotations named by representative spinners at the start of the current year; 2-36s three eighths were quoted at $2.05 to $2.10 comparing with $1.75 to $1.80 asked in January 1926, a difference of approximately 25c; 2-40s half blood were quoted at $2.35 to $2.45 in January 1925 and $2.05 to $2.10 a year later or a reduction of 30c and 2-50s fine were held at $2.75 to $2.80 early in January 1925 comparing with $2.30 to $2.35 reactions from bright colored fabrics are given as reasons for the increased popularity of worsteds, a majority feel that it was the result of the comparative cheapness of these yarns as compared with a year ago and they expect a continued broadening of this move unless drastic price increases in the raw material occur.

Men's Wear Outlook

A consideration of these facts gives a reasonable basis upon which to forecast a fair-to-good year for men's wear yarns, this fact appearing to represent the brightest feature of the



market that had been without interest for several years. It was sufficient to give spinners of this class of yarns a fair-to-good volume of orders, on which deliveries were still being made as the new year opened. This movement toward a popular demand for worsted men's wear fabrics, which had been lacking for the last several seasons, is the most promising feature in the entire situation and upon its basis yarn spinners are facing the future with less apprehension than for a long period, believing this trend to be only starting a more definite move in this direction which will become apparent as the year passes.

Another of the important factors at the beginning of the year upon which more optimistic forecasts are being indulged in by all, upon which severe losses were taken. During 1925, as a result of this experience, a hand-to-mouth buying policy was generally followed not only by weavers and knitters but by spinners in regard to their wool purchases. This policy became more apparent in the latter months of 1925 as wools again displayed stronger tendencies and in December a severe decline in forward contracting in yarns was noticed.

Quotations More Attractive

A third reason for the more favorable outlook both from the viewpoint of spinners and manufacturers, is the lower range of quotations noted at the beginning of 1926 as compared with the opening of the previous year. Early in 1925 spinners were quoted in January of the present year, representing a difference of 45c.

These important reductions are resulting in a freer movement of worsted yarns and worsted goods and further declines would have the tendency to accelerate this movement in the opinion of leading factors in the trade. It has been particularly noticeable in an active request for quarter and three eighths grade yarns to be used in men's wear piece dyes which proved to be a popular fabric, especially in blues, during the fall months. Other varieties in cheviots and serge cheviots also came into prominence later in the year and manufacturers look for an attractive volume of business in wide wales in the present year. Although a number of factors such as style swings and trade so far as weaving yarns are concerned. Many do not speak so encouragingly concerning the dress goods yarn outlook, although here too the idea that the worst has already been seen gives the future a more optimistic character. Demand from dress goods manufacturers has been sub-normal for many months, the feminine preference being for silk goods and other fabrics of light weight. The popularity of balbriggan dresses has also been a major factor in curtailing sales of woven dress goods and is blamed by a number of weavers for their lack of business during a large part of last year. So far as the actual consumption of yarns is concerned, the balbriggan feature merely represented an increase in the sale of knitting yarns

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and had a reverse effect upon sale of weaving yarns going into dress goods.

While the decline in sales of dress goods yarns is regarded as distinctly a style trend by many in the trade, who regard it probable that a swing in the opposite direction will be started during the current year, others are beginning to feel that manufacturers of this type of goods should take advantage, to a greater degree than they have heretofore, of the popular call for lightweight fabrics which is illustrated in the large call for silk dresses of all kinds in preference to heavier worsted lines. They feel this group of manufacturers should specialize more strongly than ever upon such lines made somewhat along the lines of men's tropical worsteds and take advantage more strenuously of the call for fancy and novelty lines which was an important factor in bringing the unusually active call for silks and rayon decorated dress goods into prominence during the recent seasons.

There has developed during the past year a more general feeling among spinners, manufacturers and selling agents that the public should be more thoroughly informed of the advantages of worsted fabrics not only in regard to wearing qualities but also as to their possible advantages over other materials so far as warmth, absorbent qualities, etc., are concerned. Many feel that more general knowledge in this quarter would undoubtedly react in an extensive broadening of operations throughout the entire industry. There is a particularly attracive field in this regard in the underwear branch of the industry, as medical authorities are practically unanimous in stating that the continuous wearing of many other materials next to the skin, in sections of the country where severe winter weather is found, will result in injury to those who follow this practice.

Advertising May Help

Such ideas are carried further by leaders in the worsted spinning and manufacturing trades and the thought has been expressed that they should no longer be content to wait for the popularity of worsted fabrics but that efforts should be strongly made at this time to accelerate this movement by such means as furnishing attractive samples of the newest lines to leading stylists of women's clothing which would tend to cause them to feature worsted fabrics more strongly, pointing out not only the advantage in wearing qualities but style novelties as well. There are definite indications that these thoughts are being given more careful attention than ever before and concrete action may be taken along such lines within the year. In other words the industry is going to foresake a certain passiveness in favor of a more militant activity.

While spinners as a group enjoyed a more active year in 1925 than in 1924, there were few fortunate enough to show important sized amounts on the profit side of their ledgers at the end of the year, although certain ones who were fortunate enough or wide enough awake, according to how you wish to look at it, to follow style changes to meet a sudden demand for special or novelty yarns, have had a fair year. The average spinner, however, considered himself fortunate if he showed no loss for the year—which many were unable to do.

There has been insufficient yarn business placed to keep all spindles running at any one time and as a result there has been severe competition on all inquiries with spinners needing orders so badly that they found it necessary to take business at many periods during the year, at prices that averaged below actual cost to them, not only leaving them with no profit but in many instances showing a loss of considerable proportions. The question is naturally asked by dubious manufacturers why the spinner continued to accept orders that showed him a loss. The answer more frequently given is that he is able to cut his loss by keeping machinery running and at the same time this keeps the machinery in better condition, an idle machine deteriorating much more rapidly than one kept in constant use.

Spinners' Labor Problems

Aside from these considerations, there is the important factor of spinners keeping their organizations intact during periods of small demand for yarns. They are always desirous of keeping their experienced help in the form of a skeleton organization upon which to build when demand is more active. During the early part of 1925, a number of spinners assert, they lost experienced help which has gone into other lines permanently according to present indications. As an example of this, a large knitting yarn spinner endeavored to get into personal communication with the best of their former employes when demand for bathing suit and other outerwear yarns became active late in the year but found them satisfied in their new positions in various other industries, making in most instances, more than they had formerly made with this spinner. As a result new hands had to be developed which is an expensive proposition to any manufacturer. Orders were lost by knitting spinners in the fall months on account of the fact they were unable to operate all of their machines because of insufficient help.

Although there is constant repetition of the fact, coming particularly during periods of small demand, that there are too many spindles and too many looms in the country, as a result of over-expansion during the war and during the post-war period, this talk is taken "with a grain of salt" by many of the more progressive element in the trade. They point to similar talk in the automobile industry several years ago when demand slackened and then to conditions at present when these concerns are turning out more machines than ever before and finding a sale for all of them. These factors believe the same will happen in regard to worsted spindles and that if sufficient selling energy is expended along proper lines there will not be an over-production in the worsted industry, particularly if the public has been educated to know of their superior qualities over lower priced substitutes.

Balbriggan Situation

The popularity of balbriggan dresses is a case in point. Manufacturers had been making this type of goods for many years and yet had done nothing important in it. During the last year, however, new types of this fabric were produced using rayon for decorative purposes and the largest business ever received was booked by such manufacturers during 1925. This resulted in great activity in worsted yarns, those mixed with rayon and French spun merino qualities, giving many spinners a run of six months on yarns to be used in these lines. Late in the year a period of digestion was apparent which the trade expects to be succeeded by another spring of active demand, although they admit that the fabrics popular in 1925 will not "go" again in 1926 and that mills will have to turn out entirely new lines to take the public's fancy. Spinners have been experimenting along these lines for several months and attractive samples have seen sold for spring balbriggan lines.

The fall months witnessed a revival of interest in merino underwear, a larger yarn, manufacturing and retail business being booked than for more than three years. Between this demand and that for balbriggan purposes, spinners of French merino qualities enjoyed a period of good demand, as compared with 1924 for example. The increase in sales of knitted wool underwear has been the result, to a large degree, of the publicity given these garments by manufacturers and selling agents, pointing out the superior qualities of this type when worn next to the skin in cold weather. The situation was also strengthened by the fact that a number of manufacturers had withdrawn from this field in recent years due to the long period of relative inactivity in favor of cut garments for both sexes, causing a period of activity of greater proportions to those who continued to make this grade of underwear.

Worsted Hosiery Spotty

Hosiery worsted yarns could not be termed better than fair during the year, manufacturers of half-hose being in a more advantageous position than manufacturers of full length hosiery. Spinners of novelty yarns, such as worsted and rayon twisted together, worsted and silk, or worsted and mercerized, enjoyed a good year of business both in respect to increase in volume and the margin of profit on such yarns. The market for men's worsted hose is expanding as the popularity of low shoes for year around wear grows and as this occurs a larger number are in the market for heavier hose for protection. On the other hand a poor season was experienced by the majority of manufacturers specializing in ladies' wool and worsted hosiery, the call being for silk during the cold months as well as in the summer. However, novelty lines for sport wear continue in good request. The situation gives ground for optimism for the coming year as inventories to be carried over are not as large as a year ago, indications pointing to a healthy condition for the winter season of the present year.

The outerwear portion of the market has had fair to good business during the latter half of the year, continuing until the early part of December when demand commenced to slacken as advances in prices by spinners became necessary because of higher wool prices here and abroad. During the year high prices were reached in the early half when 2-18s quarter blood, were held at $1.65 to $1.70 and manufacturers curtailed their commitments where possible. A chart of activity so far as sales are concerned would seem to give credence to the complaint of manufacturers that they are unable to merchandise their products in large volume when yarn prices rise much above $1.30 to $1.35 for 2-20s. When business was possible at this level during the last year a larger amount was booked than at any other period during the twelve months and as quotations were raised a decline in sales resulted.

Outerwear Demand Fair

Spinners of outerwear yarns cannot be said to have had a good or even a fair year although the fall business was a great help to them in bringing the total for the year to a better level. At no time, however, has there been a wide margin of profit possible and a larger portion of the business has been placed at prices that did not allow the spinner an opportunity to more than break even. There have been such complaints from the spinning industry for many years but during the last 12 months it has been possible to locate manufacturers who were willing to admit that the price of wools at the time they had purchased yarns would not permit any spinner a legitimate profit. Statements from a number of spinners have been seen, indicating in one instance which was typical, that on $300,000 worth of business taken over a number of weeks, there was found to have been made a profit of $42 by the spinner. He considered himself fortunate and believed such a statement was better than the average spinner could display.

These considerations indicate without doubt in the opinion of a large majority in the entire trade that spinners' margins have been insufficient upon which to keep that trade in a healthy condition although it is generally admitted their problems have possibly not been more acute

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than those of many manufacturers of outerwear and other worsted goods. A part of the difficulty has been ascribed to the policy of jobbers and manufacturers placing their orders at the last possible minute and then demanding the earliest delivery, which gives the market periods of great activity during the weeks preceding the season for which the goods are intended; while after this is over there have been weeks without enough interest in the market to permit a large number of knitting yarn spinners to keep their plants running. The peak of production during the last year came during the fall months and at that time spinners of this group were found to be running as actively as they could secure help to run the machines while during other portions of the year a majority were fortunate if they were running even at greatly reduced schedules. During such periods lack of orders caused a number of spinners to liquidate, representing a considerable number of spindles removed from use during the last year.

Adjustments Made

There has been progress made along several lines which have tended to eliminate to a greater degree many of the difficulties of the spinning trade, a large share of the credit for many of such changes being due to the officers of national organizations who have been progressive in their endeavors to eliminate undesirable features where possible. Examples of such progress are to be seen in the endeavor to eliminate credit abuses. Many spinners and a large number of dealers of knitting yarns are now selling on definite and specific terms which condition is in distinct contrast to former practices in this branch of the market where the easiest terms offered manufacturers secured the order in most instances. Such a situation resulted in the market becoming so elastic that it really amounted to the spinner financing the manufacturer in his yarn purchases which, of course, eventually found its way into yarn quotations, the manufacturer paying for this in the end. Spinners believe that if standard specifications in regard to terms can be followed by a majority of spinners it will permit them finally to reduce yarn prices over what they would have been under old credit conditions.

More accurate and comprehensive statistics are now available concerning stocks of yarns, held by spinners and in dealers' hands as compared with a year ago. Increased information on such matters is proving of decided benefit to the entire spinning industry and at the same time will result in more stable markets for the manufacturer, in that it tends to keep excessive stocks from being accumulated. Formerly no one knew or could more than guess at the amount of each count in storage waiting to come into the market or how many spindles were engaged on any one particular count, so that it was very easy for excessive stocks of several counts to accumulate while other counts were becoming scarcer. Secretary Hoover in statements has indicated that such trade information is desirable and will eventually prove of benefit not only to producers of any product but also to the consumer and progress along such lines by the spinning industry has been commendable.

Merchandising Progress

Another progressive change made during the last 12 months by spinners has been the wider adoption of the practice of spinning and merchandising yarns on the grade principle rather than upon the various bloods. A larger number of maufacturers and spinners have adopted this more accurate method of buying and selling. For example, instead of buying a 2-36s three-eighths yarn it is becoming more prevalent for spinners to quote upon and manufacturers to bid on yarn of a certain definite grade, which is a more accurate method of merchandising than upon the broader term of bloods. Spinners prefer to see this practice expand throughout the entire industry, as one of the tendencies to be deplored is that of manufacturers to buy the lowest priced yarn offered to them, whereas a spinner quoting on a higher priced yarn may be really the lowest bidder when grade of yarn is considered. For example, an inquiry on 2-40s half blood may develop a variation in quotations of 15c. yet it may not be always advisable for the manufacturer to take the powest priced lot, which, after it has been woven, may have been more expensive than the higher priced yarns.

Price Trends Reviewed

A brief review of the price trend as displayed in the more popular counts of Bradford spun yarns will aid in recalling the major movements of the year and also illustrate the fact that quotations at the beginning of 1926 are on a level which is expected to be more conducive to active trading than a year ago. In January, 1925, spinners were quoting 2-32s quarter blood at $1.90 to $2.00, 2-36s three-eighths at $2.10 to $2.15, 2-40s half blood at $2.40 to $2.50 and 2-50s fine at $2.75 to $2.80. Buyers were then displaying strong resistance to high prices and trading was of a restricted character. In February a decline in the top market affected yarns and weakness resulted.

Early in March prices were five cents lower while in actual practice spinners were bettering their nominal asking prices by five to ten cents, one instance of this character resulting in a large sale of 2-36s three-eighths at a low price which indicated manufacturers would buy when they could obtain yarns at a price that would permit them to quote low prices on their goods. Later in that month, weakness in yarns became more pronounced, being especially noticeable in 2-50s fine which was now quoted at $2.50 and selling as low as $2.40, comparing with $2.75 asked at the beginning of the year. Later in March this count declined further, being bought as low as $2.25 for spot lots with other counts declining, although less drastically.

The fall in wool prices resulted in yarns reaching a $1.70 to $1.75 level in the middle of April while other counts were quoted at $1.85 to $1.95 for 2-36s, a decline of 25c from January; 2-40s were quoted at $2.20 and 2-50s at $2.40. Following wool and tops, yarns continued to display weakness during remaining weeks of April, and May found spinners cutting prices to a degree unjustified by wool declines in their endeavor to keep machinery running. In May, quotations reached $1.55 for 2-32s, a drop of 45c from the beginning of the year; 2-36s were held at $1.75 to $1.80, 2-40s at $2.05 to $2.15 and 2-50s at $2.25, a decline of 50c, and manufacturers stated they were able to pick up spot lots at even lower figures.

In June a number of important buyers felt that the bottom had been reached and more active trading started, being especially noticeable in knitting yarns in which a good volume of business was placed. Men's wear mills began to place larger orders for mixtures and bathing-suit manufacturers entered the market in an impressive manner. Quotations displayed a firmer tendency, a number of spinners raising their quotations five cents. The turn of the market came and early in July spinners were asking $1.60 and higher for 2-32s; 2-36s were raised to $1.70 to $1.75; 2-40s were raised five cents to $2.05 and up; while 2-50s remained at $2.25 until several weeks later when five or ten cents additional was asked.

More Stable Market

There was no decided change in the price level during August, and although stability was more apparent in the market, which had been lacking during the first part of the year, the prevalence of spot lots at lower than replacement cost prevented spinners from securing immediate business at the higher level asked. In September, men's wear manufacturers started to buy ahead to a greater degree and demand for knitting yarns improved.

Cheviot Yarn Demand

Buying of spot lots continued during the latter weeks of the year and has finally resulted in an important sized reduction in stock accumulation and is one of the reasons advanced for a more favorable outlook for spinners during the current year, as many believe that a larger share of week-to-week business will have to be placed direct with spinners so that improvement in demand will be more quickly felt. With the exception of a firmer trend in yarns made from medium grades the quotation level changed little during the latter weeks of the year, being felt more especially in those counts used in making cheviots and wide wales, such yarns becoming slightly firmer upon active demand during the fall months.

The outlook for the entire trade may therefore safely be termed as promising and certainly more so than a year ago, although there is little or no basis upon which to predict a boom among worsted yarn spinners. Indications in reality point to another year of close competition among them, with spinners depending to a large degree for profits upon advantageous purchases of their raw material at the low points of the year and upon better methods of distributing their product to manufacturers. To a certain extent the answer to the latter problem rests in their own hands. They should study the problem of distribution more closely than heretofore and diminish as far as possible the sale of yarns at less than cost of spinning, which has been the condition of the market during a large part of the last three years. The fact that spinners as a whole have adapted themselves to a greater extent to the hand-to-mouth buying policy of manufacturers will also aid the situation, from their viewpoint, improvement in this respect being more marked at present than at any time since unsatisfactory conditions in the worsted yarn trade developed.

Tops Firm and Lower for 1926

Firmly Based on Lower Wool Values—Noils in Larger Abundance and Lower

A SURVEY of the top and noil market for 1925 discloses a rather discouraging year, covering a continuous decline in prices from late January to the beginning of October followed by a slight recovery in prices with actual demand at the beginning of 1926 as flat as at any time during the previous 12 months. Noils have followed the general top curve which was accentuated in the case of these commodities owing to supplies increasing following greater interest being taken in worsted fabrics on the one hand and the demand from the woolen branch of the industry falling off proportionately as woolens gave way to worsteds.

The top market opens the year 1926 on a level approximately 20% lower than the previous year. For several months top-making has been an unprofitable business and independent combing establishments have dropped their prices to the lowest limit. Tops are not likely to decline any further unless a fall in wool values allows the purchasing of top-making wools at much lower prices. Throughout the year 1925 top makers were helped somewhat by the relatively high prices obtained for their noils, but this can no longer be counted upon.

Decline Checked in September

The declines in domestic wools and tops ran closely together during the

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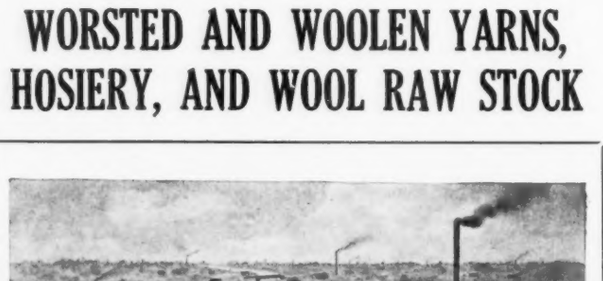

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year and comparing the opening week of 1926 with the opening week of 1925 the decline was approximately 20% as shown in the following table:

	1925	1926	Decline
Fine wool	$1.65	$1.30	18%
Fine tops	2.05	1.63	20%
¼ blood wool....	1.22	.98	19%
¼ blood tops....	1.35	1.05	21%

Wool tops declined continuously from the opening of the year until in late September a check was administered to the downward movement, the low prices of the year being registered in that month and as the year 1926 opened a slight, slow recovery was in progress. Noils followed tops very closely with the exception that the low prices in the noil market were made in October, a month later than the low levels in tops and wools. The following table shows the high, low and closing prices for the fine and ¼ blood qualities of tops and noils in 1925.

	High	Low	Close
Fine tops	$2.05	$1.59	$1.63
¼ blood tops....	1.35	1.05	1.08
Fine noils	1.25	.91	.95
¼ blood noils....	.85	.55	.58

Greater Net Decline in Noils

The following table gives a comparison of opening week of 1925 with opening week of 1926 in four standard qualities of tops:

	1925	1926	Decline
Fine	$2.05	$1.63	20%
½ blood	1.85	1.48	20%
⅜ blood, 56s....	1.55	1.25	19%
¼ blood, 50s....	1.33	1.05	21%

While the average decline in tops prices for 1925 was 20% the decline in noils ran further and amounted to an average 25%. It is not unlikely that a further relative decline in noils may be seen, such decline to be brought about by increasing supplies from the American worsted industry as well as possibly more favorable import conditions and this two-fold factor coinciding with a relatively smaller demand from the carded woolen branch of wool manufacturing.

The following table compares noil prices at the opening of 1925 and average values noted in the first week of 1926.

	1925	1926	Decline
Fine	$1.25	95¢	24%
½ blood	1.20	90¢	25%
⅜ blood, 56s.....	.95	75¢	21%
¼ blood, 50s....	.85	58¢	32%

Wool Gave Early Support to Tops

The top market at the beginning of 1925 carried along by the upward swing in wools was at a very high level, business was very quiet and there was every expectation that the heavy-weight opening would bring about a change for the better which however did not materialize. The spotty demand for high ¼ blood domestic tops, 50s, was being filled at $1.35 and from this high point they dropped near the end of the year to a low $1.03.

Early Slump in Values

Weakness in merinos at the London sales about this time had little influence in the Boston market but Bradford tops declined all along the line. A little later, however, the slump in Bradford and the distinct falling off in business in the Boston market forced a decline in domestic values, the fine tops falling from $2.10 to $1.95 and ½ bloods from $1.85 to $1.78. The severe slump in Bradford drove the warp 64s downward from 73 to 69 pence. The general situation was not viewed with any alarm by the standard topmakers and there was no sort of an expectation that the decline then in evidence was to continue for several months.

Noils followed the top market quite closely for the first half of the year but later on as the carded woolen industry began to lose ground to the worsted industry noils became relatively soft and the fine qualities selling at $1.25 in the first two months of the year could be purchased under 90c during the last two months of the year. It was impossible to uncover cheap noils of any grade in January, 1925. The demand was running chiefly to 46s and 50s. Mohair specialty noils were rather inactive while carbonized and colored noils were neglected. Contracts for production of several combing establishments were made to cover the first three months and the bids accepted were at considerably higher figures than those made for last quarter of 1924. The carded woolen industry at this time was much more active than worsted manufacturing with active spindles on an 83% basis as compared with 77% for worsteds.

Increase in Noil Stocks

The Boston Wool Trade Association inventory issued early in the year showed that the members of the association held 431,000 pounds of foreign noils and 386,000 pounds of domestic noils while a year later the inventory as of January 5, 1926 indicated domestic noils holdings at 1,069,000 pounds and foreign noils 318,000 pounds. Noil traders generally were aware that the by-products of wool combing were on an unreasonably high level brought about by strong carded woolen demand coinciding with a declining output from the worsted industry and the market was considerably concerned with the question regarding the maintenance of the high level then current. The question was considered solved in large part by the character of the heavyweight opening which again ran largely to woolens, although the trend changed at the lightweight opening in August.

Continuous Decline Encountered

From February right on to September the general market declined steadily in interest and prices. The light-weight opening although indicating quite clearly a change in the trend of wool manufacturing had its largest influence on the manufacturing organizations which are self-contained doing their own combing and spinning, so that the independent top-maker right up to the end of the year had not experienced any particular expansion of business from the change in the character of the goods demand.

The noil market at this time was inert with mill buying at a minimum. That larger supplies of domestic made materials were not arriving seem rather unaccountable and the explanation given was that the greater part of wool combing at this time was being done by mill organizations who could utilize their own by-products. Dealers were having much difficulty in maintaining values. The general trend of manufacturing was against the market. Colored noils continued inactive, nominal quotations covering 90-95c for recombed fine, 75-80c for ½ blood, 55-60c for ⅜ blood and 38-42c for ¼ blood. Fine kid noils were quoted $1.00-$1.03. Specialty noils were not much in evidence although a little buying of camelhair and artificial silk was seen at fair prices.

Wide Noil Fluctuations

The noil market has had an unusual series of price fluctuations during the last seven years. Fine noils in June 1919 were selling at $1.20 per pound. A rapid decline put the price down to 38c in November 1920, after which there was a steady advance until 90c was reached in July 1922. Another downward turn occurred reaching 70c in July 1923 after which a steady advance put the price of this commodity up to $1.25 for January 1925. Noil imports were quite extensive during the late summer and early fall months, the amount arriving in Boston alone for the month of July being 743,000 pounds at an average price of 76c. From Great Britain came 728,000 pounds, from Canada 11,800 pounds and from Belgium 2,600 pounds.

The wool top market at the beginning of the fall was very irregular and spotty. Some business was placed in high ¼ blood and 46s and considerable business was offered in ⅜ and ½ blood tops at prices unacceptable to top makers.

As the year 1925 came near the end top-makers being practically bare of wool would not accept business when it meant buying wool in the open market and manufacturing at a loss. Top-makers at this time could not buy their wool on any reasonable basis and in the main were disinclined to accept anything of a speculative character. There was a feeling that wools would be weaker at the turn of the year and combers preferred to remain close to the staple and await developments. The year came to an end with both tops and noils exhibiting a downward trend, prices decidedly regular with consuming interests on the fence and awaiting the January heavyweight opening.

Wool Standards and Statistics

(*Continued from page 211*)

The conferences held in England were the culmination of the negotiations that were begun some time ago to effect a correlation of the wool grades used in England and the official grades of this country. The correlation as finally agreed upon, embracing both wool in the grease and the coordinated qualities in tops, is as follows:

British qualities	United States Grades
80's.....	Fine.
70's.....	Fine.
64's.....	Fine. (Present U. S. type standard.)
60's.....	½ blood.
58's.....	½ blood. (Present U. S. type standard.)
56's.....	⅜ blood. (Present U. S. type standard.)
50's.....	¼ blood.
48's.....	¼ blood. (Present U. S. type standard.)
46's.....	Low ¼ blood. (Present U. S. type standard.)
44's.....	Common. (Present U. S. type standar.)
40's.....	Braid. (Present U. S. type standards.)
36's.....	Braid.

Need of Accurate Wool Statistics

That world statistics on wool would be a boon to the wool industry in all the leading wool producing and consuming countries, is felt by those who have given the matter thought and who have seen the need during the last few years of an improved statistical service. It was the good fortune of the American representative to be on the Continent at the time the International Arbitration Congress was held in Berlin and at this conference the subject of statistics was repeatedly mentioned. It was the consensus of opinions of the delegates to this conference as well as the opinion of the wool authorities in the several countries represented that statistics on stocks should be compiled and released semi-annually for all the important wool countries and furthermore that the reporting of such stocks to the designated agencies in the several countries could be made compulsory, proper safeguards being taken that the information secured from private firms be not divulged except when combined with the reports secured from the others in the trade. The periodical release of authentic information on wool should be of inestimable value to the industry throughout the world since at present, the industry, regardless of individual expressions to the contrary, is not independent of conjecture.

The wool statistical service of the United States, as the trade in this country knows, is not wholly complete. The reports that are issued by the several Governmental agencies, however, since they embrace the larger percentage of the establishment within their scope are comparable from issue to issue and are therefore of great value. In the industry in the United States are several organizations of wool dealers, wool manufacturers and wool producers working in cooperation for the advancement of their respective branches of the industry and for the mutual welfare of those so associated. The establishments that are cooperating with the Government bureaus in making it possible to give to the industry a service which is helpful and advantageous may be likened to the associated groups mentioned. It is a tribute to the members of the industry that those in the organizations referred to and those who are siding in the compilation and release of the several reports on wool lend their cooperation for the welfare of their fellow members and for the industry as a whole.

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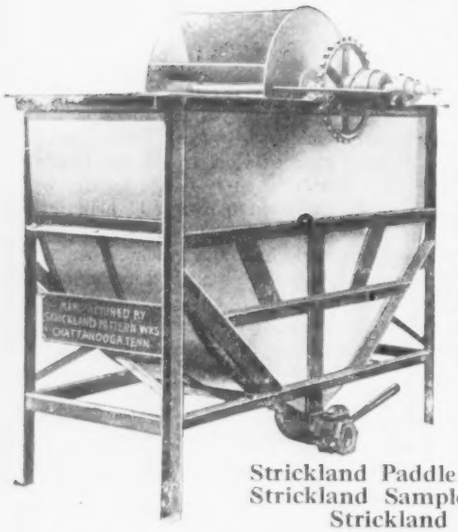

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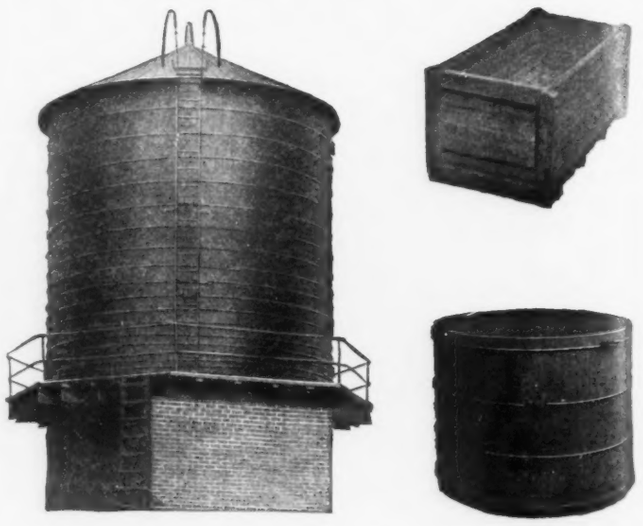

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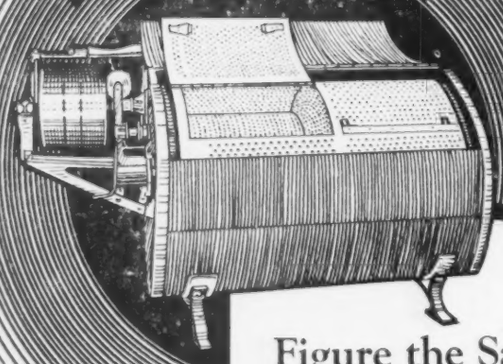

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Moderate Growth on Firm Level is Wool Outlook

Rise in Wool from July 1924 to February 1925 Followed by Long Decline with 1926 Opening on Firm Liquidated Level—First Half of Australian Season Satisfactory—U. S. Wool Stocks Decline in Spite of Increased Imports

LOWER prices, expansion and moderate prosperity seem to be indicated by a careful survey of the conditions within the wool industry. The wool market opens the year 1926 in marked contrast both as to volume of business and trend in prices as compared with last year. The downward reaction in wools, following an unhealthy and violent upturn in prices throughout the world, began early in February. In the following months the wool trade at home and abroad, but not the growers, suffered heavy losses. There seems little reason to expect any violent reaction either up or down during the next few weeks and unless the foreign markets weaken very considerably values of spot foreign and domestic wools are likely to hold quite firm and may possibly show some price appreciation coincident with heavyweight purchasing. The market is on a much sounder basis than a year ago and so far as the mills are concerned they have less wool in their possession and so must be considered large potential customers.

There was less wool in the country September 30 than for many years. The Government wool stock report indicated that the decline in wool stocks has not been checked and that there was approximately 10,000,000 lbs. less in the country September 30 than as of June 30. It seems evident that wool consumption was still more than sufficient to take care of all the imports and at the same time to reduce quite considerably the stocks of domestic wool held throughout the country. The decline in wool stocks over the last four years is shown in the following table:

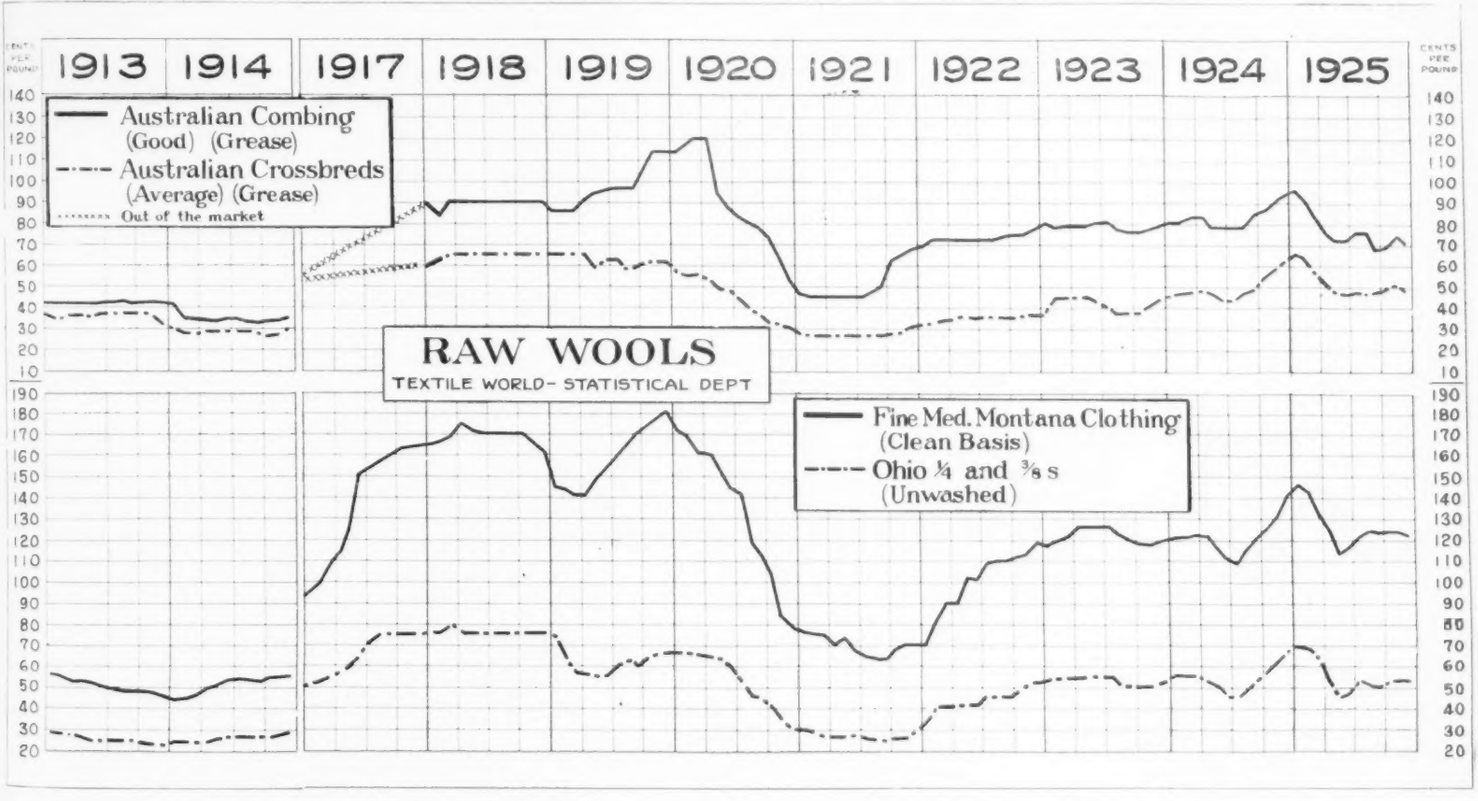
	Manufacturers Lbs.	Dealers & Pools Lbs.	Total Grease Lbs.
September 30, 1922	293,857,000	231,307,000	525,174,000
September 30, 1923	223,883,000	250,865,000	474,747,000
September 30, 1924	211,515,000	179,733,000	391,248,000
September 30, 1925	182,505,000	190,504,000	373,010,000

U. S. imports at three principal ports totaled for the year 320,000,000 lbs. as compared with 245,000,000 lbs. in 1924, an increase of approximately 30%. Boston imports showed a larger relative gain of 44%. But in spite of this large increase in imports the year 1925 came to an end with total wool stocks probably lower than the September figures. Consumption of wool averaged about 43,000,000 lbs. monthly or approximately 520,000,000 lbs. for concerns reporting. The total consumption for the United States would be 16 to 20% larger than the figure given.

The whole manufacturing situation in the United States is in a difficult position. Beginning with the wool market the better class of wools in spite of the decline are still quite high and as for top makers the prices at which they can do business are too high for the spinners to accept and mean little or no profit to the top makers themselves. Worsted yarns for their part are not based flatly upon top values being as a whole altogether too low-priced for manufacturing profit. Under such general conditions it would seem, according to some opinions, that a good sized decline in foreign markets which would enable the United States to purchase wool in large quantities would be a good all-around proposition and would incidentally enable the domestic wool trade to adapt itself to the situation by contracting for next season's clip on a suitably low level. English opinion as voiced in many influential quarters is positively opposed to any higher prices for raw materials and while it is assumed that no substantial decline in values will occur, the real tug-of-war will come during the second half of the Australian season. In England as here the goods market is set against higher prices and this in addition to the fact that Bradford importers and manufacturers lost piles of money last year through unwise buying of raw materials will probably prove a fundamental and powerful obstacle to any further advance in wool values. So far as the Australian wool sellers are concerned they had an extraordinarily good year. The slump in wool prices hurt the buyers, not the sellers.

Prices for wools in the United States began to fall early in the year and the decline was not checked until low points were made in September, after which a moderate recovery took place amounting to approximately 7% but leaving domestic wools at the close of the year 18-20% lower than mid-January prices. The showing is as follows:

	Jan.	Sept.	Dec.
Delaine	70c	52c	55c
Half-blood staple	68c	51c	54c
Three-eighths blood staple	60c	50c	54c
Quarter blood staple	60c	48c	54c
Aggregate	267c	201c	217c



Decline in Foreign Wools

Australian wools during the year followed very closely the downward curve of domestic wools though much more severe, the decline amounting to 30%. The recovery in these wools from the depression existing in September was approximately 2%. The

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showing (clean prices in bond) is as follows:

	Jan.	Sept.	Dec.
Australian 70s.....	$1.65	$1.25	$1.20
Australian 64s.....	1.55	.98	1.03
Australian 58–60s...	1.35	.90	.95
Aggregate	$4.55	$3.13	$3.18

The decline during the year in South American wools was quite precipitous from the unhealthy high level of January and amounted to approximately 34% for the year with a maximum decline of about 38-40% in September. The following table covers standard South American wools in cents per grease pound in bond on the periods named:

	Jan.	Sept.	Dec.
M. V. 56s.....	68c	42c	44c
M. V. 50s.....	62	30	41
M. V. 46–48s.....	58	37	39
B. A. 4s 44–40s.....	49	31	32
B. A. 5s 40–36s.....	46	29	30

A very clearly defined line of tendency was noticeable throughout the year bringing values of domestic and foreign wools closer together. This tendency is still operative owing to very small spot stocks of domestic wool and large foreign supplies which seem to be seeking lower levels. At the beginning of the year 1925 there was a price stretch of 41c per pound between territory ½ blood and Australian 64s duty paid, but by the close of the year this stretch had been narrowed to 11c a pound. The following table shows he situation in brief:

	Jan.	Sept.	Dec.
Territory ½ blood...	$1.45	$1.12	$1.23
Australian 64s duty paid	$1.86	$1.29	$1.34
Price stretch	41c	17c	11c

At the opening of 1925 the wool market was not particularly apprehensive but the buoyant optimism which characterized the closing weeks of 1924 had disappeared. So long as wools were moving, high prices were taken as a matter of fact; but just as soon as the market became dull and mill demand dried up then holders of substantial quantities began to wonder whether or not they had overstayed the market. Very high prices in New Zealand and South America at the close of 1924 were considered by the trade as an indication that the demand for crossbreds would be good and that these materials were likely to go higher. The situation viewed from all sides, and with all allowances made, seemed to indicate that the United States was short of wool and the Boston market in particular holding very severe decline was likely and sales of domestic wools made at this time could not be replaced.

Bearish Factors in February

There were three factors operating in mid-February which tended to produce a bearish feeling in the market. The first of these was the lower priced level set up in Australia and in London. Australian authorities took the matter quite seriously and in order to prevent any unnecessary decline decided to cut their offerings for the months of March to June inclusive some 50%. The second factor was extreme weakness shown in the Bradford top market. Prices had been carried to extreme high levels on the expectation that merino values would be maintained. These expectations were not met and as a result warp 64s had declined 15% from the first of the year. The third factor affecting U. S. markets was the slowness in placing business for fabrics in the goods market. The result of the fall opening up to this time, so far as raw wools were concerned, had been practically negligible.

The wool market in March was further depressed very considerably by the low prices made for wools at resumption of sales in Australia and London. The trend in wools seemed downward. Prices in Boston were largely nominal and in the buyers' favor. There were considerable quantities of foreign wools in bond that had been bought on high levels. U. S. wool imports were running very largely to crossbreds and it was significant of the trend in manufacturing as indicated by wool purchases in foreign markets that the amount of wool grading over 50s was barely 10% of total imports. This neglect of merinos and larger attention to crossbreds was already having its influence on relative prices for the two sorts. The decline in merinos in Australia and London had been quite severe since the first of the year but crossbreds had held up very much better, particularly in the lowest grades. At the London March sales declines of 10-15% were registered in merinos and 5-8% in crossbreds. The Continent was the chief buyer, Bradford operated sparingly and America bought practically nothing. The worst feature of the series was the large percentage of offerings withdrawn.

Early Predictions Astray

Predictions made freely at the beginning of the year that high wool prices would be maintained had proved erroneous. A conservative estimate of the decline for mid-March of 20% for foreign wools and 10% for domestic wools. Tops also were off considerably but yarns remained relatively firm, but in all three markets there was an indifferent demand, the goods market refusing to pay the price placed by the manufacturer on his fabrics led to a refusal of the weaver to pay the prices asked by worsted spinners and the latter in their turn refused to buy tops at prevailing quotations while the top makers found it impossible to secure top-making wools at low enough prices. Although goods buyers were convinced that fabrics offered by the mills were reasonably priced they had absorbed sufficient knowledge of the critical situation of the foreign wool market to make their operations spotty and cautious and in unsatisfactory volume from the mill standpoint.

Importers Liquidate at Loss

The first four months of the year 1925 did not bring to the Boston wool trade the good business very generally expected and instead of a large demand on a rising level there had been a diminution of purchasing from the first of the year and prices had steadily declined until foreign and domestic wools on the last of April were at the low level of the year and with little in sight to prevent a further decline. Conditions at this time were shaping up for the appearance for a much larger supply of wool and the situation was altogether different from the first of the year when the market was sentimentally assisted by foreign markets whose rising quotations allowed domestic holders of wool to lift their prices in spite of the fact that the buying even at that time was thin. Nature itself was now beginning to fight against the high wool market. Everywhere throughout the great West and Southwest preparations were being made to shear. About two-thirds of the territory wool had been purchased months previously and at prices that would not allow it being sold at this time except at a distinct loss. Whether the wool market would be able to sustain prices in face of an impending flood of domestic wool became the chief question. There had been considerable liquidation of foreign wool, many importers suffering heavy losses. Although the slump in prices had affected merinos just as much as crossbreds the statistical position of merinos was just about where it was when the various authorities of the world were pointing out clearly enough, and supporting their contention with multitudinous statistics, that the production of merino was behind its probable consumption.

During the month of May wool prices the world over declined rapidly and severely owing in very large part to the action of Australian wool brokers in deciding to offer total Australian stocks at the various auctions instead of reserving some three or four hundred thousand bales for sale during the latter part of the year. Following the slump of Australian prices the third London series registered very considerable declines in values at the opening, well below the previous lows made in Australia. The general situation became so unsatisfactory that Australian sales were discontinued indefinitely and the London sales curtailed. Domestic wool prices in Boston at this time were practically at the previous year's low level with foreign wools duty added on a slightly lower level. The top market was about 6% higher than 1924 low level while worsted yarns were approximately 2% higher than the lows of 1924. It was quite evident that very little permanent adjustation had occurred between wools and their semi-manufactured products in spite of the severe wool slump either the raw material was yet too high or yarns and tops were too low as related to wool. The pressure of the goods market was felt more in tops and yarns than in wool and from this standpoint with tops too high for the worsted spinner and yarns too high for the weaver the process of readjustation promised to be a very long drawn out operation.

Complicated Mid-Year Situation

Looking at the wool situation in a large way around mid-year it became a question, so far as the United States was concerned, whether there was or could be for some time to come sufficient absorbent capacity to take care of the full machine production of wool manufacturing. It looked as though manufacturing might become more and more seasonable. Periods of intense activity being followed by periods of acute depression. Many manufacturers had been out of the market for weeks and months but the time was approaching when they must buy more wool or go out of business. Stocks of wool held by manufacturers in the United States were the smallest for years and this had had a two-fold effect of increasing stocks of unsold wool and of depreciating their value. If manufacturers' stocks in United States had been anywhere near normal there would have been a positive shortage of wool in the Boston market at this time and higher prices in spite of London or any other foreign market. Action of manufacturers in the United States in allowing their wool stocks to sink below normal had been duplicated by manufacturing interests on the Continent and also in Great Britain. This was a feature of the situation that had been overlooked. Emphasis had been wrongly placed. The point to be noticed was not the very large stocks of unsold wool in the hands of growers, pools and dealers but small stocks in the storehouses of manufacturers in the United States, Great Britain and the Continent of Europe generally. Wool manufacturers, as in the 'case of other lines of industry, were following in the manner of "stream-line" production; stocks behind manufacturing were limited, manufacturing orders for future delivery also limited and the whole situation much more fluid and hand-to-mouth than would have been considered possible in pre-war days. This did not apply exclusively to the United States; it was quite general in consuming centres throughout the world.

The London sales opening July 7 caused little more than a ripple in the Boston market and further ripples were seen the following week when wools were offered in Melbourne and Brisbane; nothing occurred to affect the fundamentally strong situation in the United States domestic wools. Americans bought no merinos in London for the very good reason that the higher prices registered there were little more than a flare-up brought about by urgent French and German purchasing. Merinos opened lower in Australia and there was some American purchasing but the amount of American

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style wool offered was very small.

American Woolen Cuts Wages

Wool consumption and wool machinery statistics around this time made a very poor showing and continued declines in wool consumption and in general activity had been recorded month by month. About the middle of the month of July the wool trade was taken by complete surprise by the American Woolen Company posting a reduction of 10% in wages to take place at the close of the month. British textile interests also posted a reduction of 5% in wages to take place on the same date July 25. High prices for raw material on the one hand and strong opposition on the part of the goods market on the other hand had left manufacturers with no other option than to reduce their manufacturing costs by the cutting of wages.

The position of raw wool in the markets of the United States tended to moderate stabilization. It was doubtful however whether any considerable volume could be moved to manufacturers at this time except at concessions. The level upon which manufacturers would operate freely was below that upon which dealers were operating. Mill buyers evidently feared to endanger the success of the light-weight season and were cautious about raising their bids for raw material. Conservative members of the wool trade had about the same idea, but did not seem willing that the whole of the burden of making it safe for manufacturing be placed upon wool holders. The undertone was not particularly firm and there was an uneasy feeling in some quarters that wools were not likely to go any higher for the balance of the year. Holders of high priced domestic wools were of course moderately bullish on the situation but importers as well as top-makers and spinners were inclined to take the bear side, believing that a lower level for raw materials would be of general advantage to everybody.

The wool market was more stable early in September but tremors continued and subsidence in prices was still a feature of the situation. The long decline that had been in operation since the first of the year was checked finally by the end of the month. Fairly large quantities of wool on consignment, also wool held by pools, were awaiting a stronger market. As to the future course of prices the feeling was quite general that the closing months of 1925 were unlikely to witness any upward rush in values.

Boston continued the cheapest of the great wool markets with the possible exception of one or two Australian centers. Some discouragement was visible on Summer Street and it was said that holders of wools had become tired of seeing them around and were ready to throw them into the discard after carrying them along for months with prices declining steadily. The mill business dribbling in was barely sufficient to maintain prices. There had been a constant carrying out of the market of worsted wools, but in no such volume as to create any particular enthusiasm or leave anyone to anticipate that big buying of staple wools by manufacturers would be seen. Government reports showed an increase in wool consumption on a grease basis of 2,605,000 lbs., wool consumption for 1925 reaching its low point in May and June, 38,000,000 lbs. for each month.

Steadying Factors in October

The wool market was steadier in mid-October but Boston was not expecting any boom in prices or any such upward rush as occurred during the closing months of 1924 and yet anticipated that better selling conditions would prevail for the balance of the year. A number of important events occurred at this time to sustain the opinion of wool merchants who look for a better rather than a poorer wool market for the balance of the year. Among these were noted: (1) hand-to-mouth buying was still the policy but in the aggregate a considerable volume of wool was going to the mills; (2), rapidly declining stocks of domestic wools, especially the medium qualities; (3), sustained strength in foreign markets; (4), better prices for foreign medium wools taken out of bond; (5), renewed interest in the goods market, particularly in women's wear fabrics; (6), continuous decline over months of manufacturers' stocks of wool in bond; (7) approximately 20% of the new Australian clip already sold at firm prices; (8), the London sales at which 225,000 bales had been offered closing firm with medium to low crossbreds 5-7½% higher than closing July prices; (9), latest Government statistics showing larger wool consumption and increased spindle activity.

As the year 1925 came to the end activity in the Boston wool market flattened out. Deliveries on old purchases continued satisfactory but as to new business there was rather an uneasy feeling manifested in some quarters that wools would be weaker at the turn of the year. The slight development of interest in the new clip had died away and easier conditions in the foreign primary markets found Summer Street more of a buyers' market, though not quotably lower. There was an abnormal attitude regarding contracting on the 1926 domestic clip. Everybody was hesitating and the only optimism visible was talk not supported by action.

Sound Substitute Basis for 1926

Fibres, Rags and Wastes Substantially Lower Than 1925—Larger Relative Output of Worsted Wastes Likely

THE year in reworked wools was not altogether a poor one and it was only following the lightweight opening when it became apparent that worsteds were about to register a substantial comeback that woolen mill activities began to recede, bringing about a diminished demand for processed fibres, as well as for graded rags from mills that do their own picking and garnetting. Imports of woolen rags during the year 1925 were very substantial and although exact figures are unobtainable, 20,000,000 pounds for the year is not far out of the way.

In both the fibre and woolen rag markets the year opens with prices on a substantially lower and rather unsteady basis and the outlook for as large a business as was received in the first quarter of 1925 not quite so favorable. Mixed softs open the year 20% off with most graded rags sharing in the decline. Blue serge and blue worsteds furnishing notable exceptions.

As to the actual production in poundage of recovered wools for the year the only way in which an approximate estimate can be secured is by recurring to the Government reports covering the industry for the years 1921 and 1923 in which the total poundage in 1921 from 53 establishments was given as 27,000,000 pounds and for 1923, 55,000,000 pounds from 59 establishments. Taking into account the large woolen rag imports for the year a production of 50,000,000 pounds would seem to be a fair estimate.

Woolen rags and recovered fibres are more or less stagnant at the movement and awaiting new impulses that may come into the market following development of the heavyweight opening. The situation so far as lack of new business is concerned is very similar to that of a year ago when mill interest was at a low ebb and the markets awaiting developments. Price changes in fibres and rags have been less extreme than in wool wastes and noils during the past twelve months. Mixed softs are off about 20% selling at around 18c a year ago as compared with 14c at this time. The following table compares several standard graded rags over the period:

	1924	1925	Decline
Coarse light merinos ..	14-15c	11-11½c	22%
Fine Light merinos ...	29-30c	24-25c	17%
Blue serge...	15-16c	14½-15c	5%
Red knit....	33-34c	25-26c	24%
Blue worsted ...	9-10c	9-9½c	2½%
White knit..	57-58c	45-46c	21%

It will be seen from the above table that blue serges and blue worsteds are approximately where they were a year ago although mixed softs are 4c per pound lower and rough cloth 2c per pound lower.

The wool waste market opens the year very quietly with prices on a relatively low level and a good expectation of an early return to regular business. A year ago all kinds of mill wastes were at a high level on which sales were quite substantial as for example 100,000 pounds of ⅜ blood thread waste at 89-90c which price may be compared with 68c for similar material at this time. The approximate situation in white worsted thread wastes for the two periods is seen in the following table:

	1924	1925	Decline
Fine	$1.15-$1.20	$1.08-$1.06	12%
Half-blood ...	1.00- 1.05	.90- .92	10%
Three eighths blood	.85- .87	70- .73	16%
Quarter blood..	.70- .75	50- .53	30%

Soft wastes also show evidences of the downward movement and the following table gives in brief the situation:

	1924	1925	Decline
Fine white lap waste	$1.45-$1.55	$1.30-$1.35	12%
Fine colored lap waste	1.20- 1.25	1.05- 1.07	14%
Worsted-card waste ..	.75- .80	.62- .63	20%

A limited amount of new business continues to flow into the reworked wool industry but insufficient to keep production any where near high point. The unfilled poundage of the industry is probably smaller at this time than at any other period for months, but on the other hand there are indications that the overcoating industry in particular is likely to be a good consumer of fibres suitable for these heavyweight fabrics. Felters also are busy and shirting manufacturers as well as manufacturers of lumbermen's socks also other types of hosiery for men are doing fairly well. So far as rag stocks are concerned they are probably at a low ebb. There seems a big vacuum forming in rag stocks in warehouses of consumers and this may be considered a rather healthy feature of the situation. The market for graded materials is quite soft for some qualities and material like fine light merino can be purchased at buyer's price. Domestic rag graders had a poor year and 1926 will furnish no relief unless softs fall to a much lower level or prices for graded materials advance sharply. English graders are having the same difficulty as their compeers in the American market and are compelled to place quite a lot of unwanted graded material into stock in their attempt to supply the limited and narrow mill demand.

Scanty Business in January

So far as new business is concerned the recovered wool industry is stationary. There are good hopes, however, of substantial business a little later on and renewed activity in the overcoating group is a favorable sign. The various types of fabrics which utilize mill wastes and recovered wools have not been thrown into the discard and with the worsted industry handicapped by high priced wools, tops and yarns, wool manufacturers having a large and available source of raw materials in the woolen rag market and the recovered fibre industry may be able to make a much better showing than appears on the surface. Deliveries of most classes of material are being made on old orders and contracts, but as for additional business it is simply not obtainable. The general market covering these com-

modities is duller at this time than it has been for several years and from causes not associated altogether with prices of either recovered materials or of woolen rags, but partly by reason of the supercautious attitude of mill purchasers reflected in their determination to operate as liquid as possible. The craze for abnormally low stocks has gone about as far as it is likely to go and not a few consumers may later be caught short in a rising market.

Wool waste houses are sitting tight on their holdings. They refuse to become nervous over the situation and see no reason whatsoever for trying to force sales and are at the same time quite indifferent to the claims of traders who would like if possible to secure a little cheap material. The supply of really good worsted threads from our domestic manufacturers is at all times too small to meet the woolen mill demand. Fine threads, whether of cotton or wool, are very high priced wastes as related to the manufacturing processes and the output in both industries is becoming smaller all the time. This makes the importing of thread wastes a rather constant quantity. These materials come not only from Bradford and the Continent but occasionally from Australia.

Recovered wool manufacturers, like other men in the wool textile industry, kept their stocks down to a low point pending the close of the year. Inventories of rags held by the large plants in New England would probably show a very substantial decrease compared with a year ago. There is little reason to suppose that substitute makers and just as little to suppose that woolen mill users will buy rags in volume even at bargain prices until cloth business appears. The stage is all set for good business. At no time in the history of the industry were the processes and methods of dealing with old materials in better shape. Machinery in the larger organizations is thoroughly up to date, while the so-called "shoddy" of today as compared with material produced before the war is a very superior product. Prices are rather in favor of the buyer and yet manufacturers making contracts for delivery at a price will be very careful to find out whether they can cover themselves on rags without advancing the market too rapidly.

Fundamental Changes Pending

Fundamentally, however, the situation is changing. For the last three years the woolen mill business has been much better than worsteds and this brought about what might be considered abnormally high prices for worsted wastes, as well as for noils, the by-product of the worsted industry. The trend now seems reversed with worsted manufactures considered in this respect as producers of waste expanding, while the wool industry, viewed from this angle as the consumer of wastes is falling steadily behind.

If the recovered wool market were the only unsatisfactory one there might be reasons for a more energetic inquiry into the prospects connected with the probable requirements of the next manufacturing season. But when most textile raw material and semi-manufactured material markets are enveloped in the same deadly dullness recovered wool manufacturers may recognize the fact that they have plenty of company and that a change for the better is positively certain in the not far distant future.

The demand for substitutes may be broader than it has been. For a very long period light colored stocks have been in the limelight with a few dark-colored materials only, such as blue serge, meeting any large mill interest. Overcoatings and men's wear fabrics will probably swing away from the range of colors which according to precedent and custom belong chiefly to the feminine section of our population. Men's wear fabrics, it is said, will probably swing right back again to the sober shades that are distinctly masculine.

Continuous Flow of Imports

Imports of high-grade rags continue to hold up very well. There has been a continuous flow of good rags, white and colored, new and old into the United States for every month of the year and while the mill waste and noil markets of Great Britain and the Continent are at this time too high for our importers this is not the case in woolen rags and clips. In the Dewsbury English rag market most woolen rags are steady. Woolen manufacturers are taking a more optimistic view of the situation and are buying more readily. The fine rags sell with ease while worsteds, free from serges, are in much better demand. The rag list as a whole is very steady.

The American industry has not been subject to any foreign competition from imported fibres during the year. Some of the Dewsbury English manufacturers could probably place on this market the lower grade materials which they call "mungo" at some profit for themselves, but there is no American demand for this class of material. The only point of contact between the reworked wool industry and foreign markets is in the matter of supplies of raw materials and throughout the entire year there have been very substantial imports, particularly of knitted materials which on the whole are better suited to processing than the materials produced in this country. In the United States everything runs to a fine stylish grade of material while in parts of Europe as well as in Great Britain the knitted hosiery is very substantial and made of virgin wool and lends itself very easily to the process of picking or garnetting as the case may be.

The English sorter goes more thoroughly into the matter of grading than his American associates and on the manifests of recent incoming steamers some of the knit stocks had fancy names attached to consignments such as "rose," "biscuit," "heather," etc. We seem to have nothing in this country corresponding with the graded merinos of the English market which are as follows: light blue merino, 112 shillings; dark blue merinos, 56 shillings; drab merinos, 135 shillings; green merinos, 56 shillings; brown merinos, 56 shillings; dark fancy merinos, 50 shillings; red merinos, 85 shillings, all per English cwt. or 112 lbs.

Rayon Wastes Increasing

Artificial silk waste continues to grow in importance. More traders are looking into the situation and some of the larger houses are endeavoring to make connections with foreign producers. The consumption of the raw material has been larger for months than its production in this country, and a large increase in production in the United States will be seen inside of 12 months and this will of course mean much larger quantities of waste from the original producer as well as of threads and other wastes from mill consumers. The general line of quotations covering these materials in October was as follows: open bleached, 47-48c; open unbleached 42-43c; bleached threads, 42-43c, colored, 23-25c; garnetted, 57-58c; noils, 45-48c.

It is difficult many times to distinguish the real value of the rayon waste offered by traders unless a careful examination of the material is made. Artificial silk wastes fall naturally into two main divisions; first, those wastes that come directly from actual manufacturers of rayon either from wood pulp or linter and secondly those wastes that come out of consuming mills, who buy tops and yarns for manufacturing processes and who as a result accumulate noils and thread wastes as by-products.

General Mid-Year Situation

At mid-year the reworked wool industry showed improvement. Although unfilled poundage was declining, fairly substantial business was arriving from mills who had received additional orders for fall fabrics. Certain felt manufacturers and knitters able to use the highly finished products of this industry were taking further business. The decline in prices of carbonized and carded materials had been more marked in the high priced stocks than in the worsteds and cloths. Carbonized white knit was quoted 65-70c; carbonized white softs 62-65c; carbonized fancy knits 30-32c; carbonized light hoods 48-50c; carbonized fine light merino 46-49c. Prices for carded skirted cloths and serges were practically unchanged.

On the other hand blue serges skirted and carded advanced from 27c to 31c. Coarse light merino carbonized was firm at 30-32c. Graded stocks were not particularly firm. While the rag market was appreciably higher than it was a year ago, as compared with the year 1914 the advance registered was on the whole less than the percentage advance registered by wool. In the following table it will be noted that the rags are on the average below advance in domestic wools:

	1914 Average	June 24, 1925	Ad vance
Light skirted worsteds	53¾c	91½c	70
Light skirted cloths	31½c	64½c	8
Blue serge	7c	14c	100
¼ blood wool clean	....	....	90
Fine wool clean	....	.....	112

The worsted waste market was firmer. Some of the largest substitute plants were buyers of threads and with their modern machinery were able to turn out a very high grade material. High prices paid for lap waste in this market led to a scrutiny of the possibilities of importing from Bradford. Drawing lap sold as high as $1.40. In the Bradford market choice drawing lap was quoted 46 pence which with duty and charges added made the landed prices about $1.25. Fine white worsted threads in the Bradford market seemed to be well in the importers' favor, being quoted 36 pence, which with a duty of 16c and other charges added gave a price of 91c as against $1.00-$1.03 for similar threads in Boston.

There was a waiting market in wool waste. Prices were decidedly irregular; there was no trend to the market. The slight recovery made from the low level touched a couple of but that was about all.

Comparing approximate prices for white worsted wastes mid-year with those for year previous it became evident that fine and low ¼-blood worsted threads were still relatively high. The showing was as follows:

	May 1924	May 1925	Change
Fine	92–95c	$1.03–$1.05	Up 11c
Half blood	80–85c	.88– .90	Up 7c
Three eighths blood	72–76c	.78– .80	Up 5c
Quarter blood	60–65c	.63– .65	Up 2c
Low quarter.	40–45c	.53– .55	Up 11c

The Dewsbury English market was at a standstill. Demand for rags has suffered a severe setback. Considerable quantities of unwanted stocks were accumulating in graders' warehouses. The decline in wool values which brought Bradford to a near panic affected adversely sales of rags and clips in Dewsbury. Very low prices were established also in Bradford.

Fibre Production Large

Recovered wools were as firm as anything in the textile line. The manufacture of processed fibres was the only sub-industry in wool manufacturing that was working full time. Unlike the woolen industry as a whole, apparently over-machined as related to the consumptive capacity of the United States, the recovered wool industry as related to wool manufacturing is under-machined. Only in some such way as this could long-continued overtime, entailing the running of carding machines in some sections of the country day and night, be explained. According to opinions expressed at the annual meeting of the National Association of Wool Fibre Manufacturers the industry was running 100% capacity. Mill stocks were adequate to the situation and in the main held at prices well below prevailing level in the rag market.

Broadsilks Enjoy Extremely Successful Year

Sales of Silks Expand Greatly Due to Reasonable Prices, Consumer Preference, and General Prosperity—Satin Materials Favored Through Greater Part of Year—Mills Hard Put to Satisfy Demand for Georgettes and Sheer Weaves for Fall and Winter Season—Situation Still Sound

THERE is a saying in the silk trade that one year in seven brings prosperity to the trade as a whole. If that is the case, the extraordinary prosperity enjoyed by silk manufacturers during 1925 arrived one year ahead of schedule. During the inflation boom of 1919, many manufacturers had a very successful year which would mark 1926 as the next banner period. Whether the advent of prosperity was a trifle premature or whether the extremely satisfactory conditions of 1925 are to be repeated on a more ambitious scale will have to be answered later.

In any event the year 1925 was extraordinarily good and in many respects the most satisfactory twelve months period in a decade. Comparing it with 1919 brings out very clearly the vast changes that have taken place in the conduct and spirit of business. Profits were made in the earlier year primarily through price advances with the normal manufacturing margin a very small consideration. Nearly everyone wanted to see the market rise forgetting that it would be necessary for it to come down again. The prosperity of 1925, however, rested on a far different foundation. Silk manufacturers looked to a normal profit margin and nothing more. Any advance in the raw market met a strong and organized resistance. The necessity of keeping prices on a reasonable basis was widely recognized. The result is that at the end of an unusually successful year, the industry finds itself in almost as strong a position as at the beginning.

Reasons for Prosperity

Casting about for reasons to account for the generally prosperous conditions in silks, one finds several of about equal relative importance. For one thing prices were on a very reasonable basis and well in line with general commodity levels. Another very important factor was a decided consumer preference for silks. The dress industry was keenly alive to this preference and used silks largely throughout the year, a fact that had much to do with the large sales of silks over the counter from February on. Lastly there must be taken into account the prosperous condition of the country as a whole with nearly all sections of the country having a huge buying power with which to absorb a record output of various semi-luxury articles.

If fundamental conditions favored silks and led to the expectation of a prosperous year, the situation within the industry itself was an additional factor. During the period 1920 through 1924 there had been only a minimum of expansion. Plant facilities had been unduly enlarged in the hectic year of 1919, and the years immediately following had seen the sales field expand to a point where it could absorb the capacity of the industry. Particularly in the throwing field had there been unnecessary expansion earlier. The beginning of 1925, if anything, saw the industry under-equipped to handle the tremendous volume of business shortly to be offered it. Proof of this can be seen in the fact that a majority of mills have been running sixteen to twenty hours a day on two shifts. Not a few have been running twenty-four hours a day with three eight hour shifts.

Taken all in all silk manufacturers had a very profitable spring season. Adequate preparations had been made during November and December in the way of accumulating some stock and these stocks and the production of the first four months of the year moved easily and with the margin of profit very satisfactory. That demand was greater than the supply at this time is evident from the strong trend to fabric prices through the market even during March when raw silk declined 40c a pound. This decline enabled manufacturers to buy for April and May and instead of causing buyers to hold off, merely gave mills an added profit.

Though satin crepes occupied a dominating position through the spring all qualities found an excellent demand. Flat crepe was largely used by the dress and costume slip cutters and was taken later on in lighter colors by the stores for summer dresses. The popularity of the ensemble mode was in part responsible for the big print season. Prints occupied a place all their own and the end of the season found stocks well cleaned out. For linings and dresses also were the prints wanted, with the 54-inch goods commanding excellent prices. The border effects in the wider goods were also very good as were the plain materials. Introduced as a novelty, the response to the 54-inch width was immediate. Stores featured the new possibilities of this advance in the weaving art as applied to silks. The dress cutters were less enthusiastic as the price on the 54-inch goods as a novelty took away any advantage that could be derived in the cutting.

Following Easter, broadcloths, radiums and tub silks came into their own for wash dresses and repeated the success of a year previous. The months of April, May, and June moreover noted a continued call for all spring qualities due to the increased sales at retail. Reorder business was large through these months, a fact that permitted the trade to go into the fall season with a minimum of stocks.

Fall Demand

Satin crepe again proved to be the leader for fall. Heavy advance business was placed by dress houses during June in the crepe satins, flat crepe, and georgettes. This class of buyers was impressed with the prospects of large sales of dresses, the firm price situation, and the small stocks of silks all through the market. Several new colors leaped into popularity at this time with the usual requests for rush deliveries. The purple shades accounted for the bulk of the early fall sales with pansy in demand at first, shortly followed by pencil blue and others. So large was the demand for these colors that when the natural reaction ensued, mills had only small quantities left which were easily redyed into the staple black and navy.

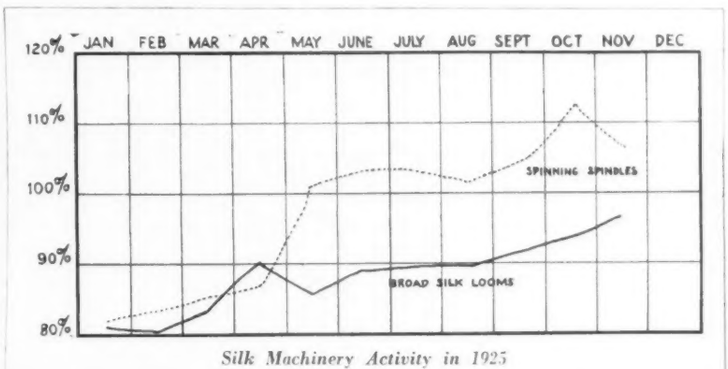
Mention has not been made as yet of georgettes which unobtrusively at first but surely have taken on greater importance right along. Early in March an increase in the inquiry for georgettes began to be noted. The demand gained momentum through April and May until by the end of May an almost famine scarcity existed in the greige goods market with large premiums being paid by jobbers for both two and three thread constructions. Georgette has always been a good summer number and there was a disposition to deprecate the unusual scarcity. The last of June was expected to see the end of the georgette craze by which time the high prices would be a thing of the past. No such development occurred, however, and through July and August mills could not weave enough of this popular number. Accustomed to see sudden spurts in demand followed by an equally sudden falling off, the trade erred on the side of conservatism as far as georgettes were concerned.

Through the fall months the swing to georgettes has gained momentum. Endorsed by stylists for both the winter season and the spring, georgette has maintained its popularity. At one time in October and November, two thread georgette in the form of thrown silk was utterly unobtainable in the market so great was the demand for it. A factor that has prevented any overproduction in spite of the evident fact that mills could sell all they wished to of this desirable article, has been the difficulty of getting adequate throwing facilities. Throwsters and thrown silk dealers, of necessity, must take care of their regular customers in the staple three, four, and five thread crepes. This means that only a limited number of machines can be run on two thread which of itself is the slowest producer among all the crepes. Throwsters at this time began to make up for the lean years preceding and could obtain up to $2.50 a lb. for throwing two thread as against $1.40 six months before.

Mill Activity Maintained

The last quarter of the year has witnessed no slackening in mill operations although sales have not been up to the three previous quarters. Flat crepe has usurped the position of satin crepe for the coming spring and the satins have been very quiet. Georgettes have been good right along, however, and radium has also noted an excellent response. Stocks of finished silks at the end of the year are undoubtedly larger than at any time previously in 1925 but with the outlook for another big silk season, are causing no concern. The wide goods, that is to say the 54-inch materials, have been very quiet during this quarter but mills look for a resumption of buying for the later spring. Stocks at the end of the year consist principally of the wide goods, satins, and crepe de chine. Considerable preparations have been made for another big print season with fairly sizable quantities held by the larger houses.

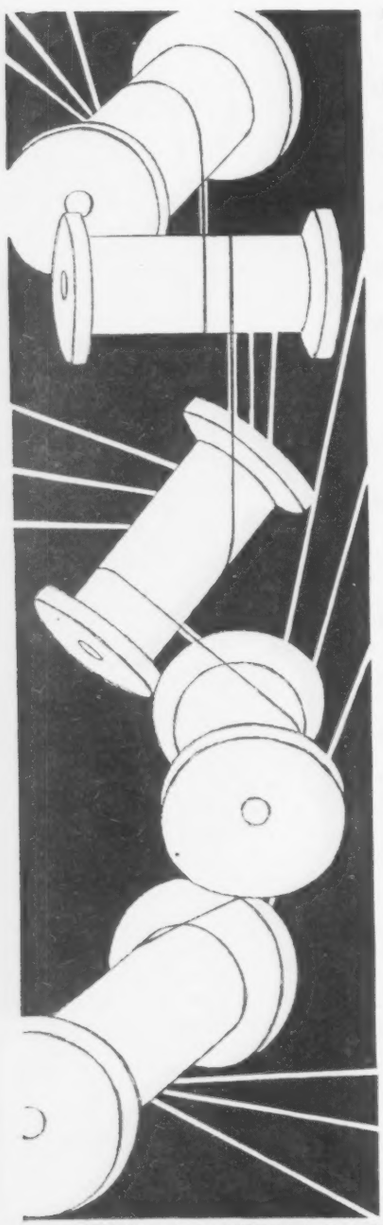
Going into 1926, the situation is still strong but not so assured as a year ago. Evidence that supply is catching up with demand is seen in the fact that mills have had difficulty



Silk Machinery Activity in 1925

Have you tried Silk as an Extra Sales Feature?

More and more a disposition to use silk wherever possible shows itself among the manufacturers of woolens and worsteds.



The reason is not hard to find. In the minds of the buying public silk is the symbol for luxury in fabrics. Silk has so great an acceptance value that the manufacturers are using silk yarns when they can be adapted to their needs, as an extra sales feature.

Cheney Brothers have the experience, laboratory and mill facilities to co-operate with woolen and worsted manufacturers in securing desired effects economically and practically. Wherever silk can be used, Cheney Brothers are equipped to supply yarns of high lustre and uniform count.

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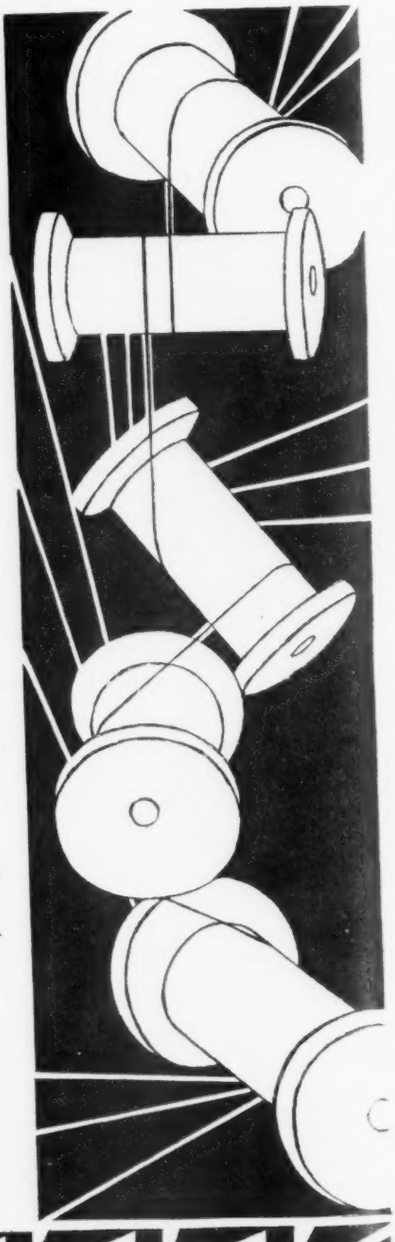

CHENEY
SILK
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in getting advances to correspond with the higher raw market. As a matter of fact manufacturers state that they cannot get any more for their merchandise than when raw silk was 50c a pound lower. The strong features are present, however, and lead to the expectation of continued large sales through the first half of the year. Retail sales are still increasing and bid fair to make new records this spring. Moreover, the position of both retailers and cutters as regards stocks of silks favors the manufacturer. Both are carrying small inventories and the burden is entirely on the silk manufacturer—a burden which he seems well able to shoulder with the profits of a very good year to sustain him.

Fairly Successful Ribbon Year

Spring and Fall Seasons Generally Satisfactory But Operations Decline from September on—Millinery Disappointing

THOUGH the ribbon manufacturer experienced in 1925 the most satisfactory twelve months since 1919, he did not share in the extraordinary gains made by other branches of the silk trade to the same proportionate extent. The increases in sales of silk goods over the counter and the wider use of ribbons on silk dresses brought a modified prosperity that the ribbon trade welcomed but at the same time there remains considerable room for further improvement. Trade data indicates that ribbon looms were operated at a higher rate than during 1923 and 1924 but that this rate is far behind the mark set by the broadsilk and throwing branches of the silk trade. It is fairly evident that the factors that have contributed to the depression in ribbons since the war are still operating, though minimized by the general prosperity of the past year.

The first six months of the year, however, proved the best experienced for several years. Operations expanded at the mills and sales were large to the cutters and retailers and fairly satisfactory to the millinery users. The position of the retailers as regards stocks brought in good business during the spring and summer months while dresses required elaboration in trimming which brought a good demand from dress manufacturers. A moderately good demand was also noted for millinery use although not up to expectations. For scarf purposes a considerable yardage was used and ribbon decorations in the home were advertised in all ribbon departments resulting in an increased use for this purpose.

Some Curtailment

Through the summer and fall sales continued satisfactory but increased costs for raw materials together with a rather clouded outlook for the coming spring caused some curtailment in loom operations late in the year. From September on curtailment was noted, moderate it is true but a fact nevertheless. The chief cause for apprehension appears to be the likelihood that millinery will not continue to take its accustomed quota of ribbons. The higher priced elaborately trimmed models sell in only a limited way and the extraordinary popularity of the untrimmed felt model indicates rather clearly a disappointing spring as far as the millinery users are concerned.

During the holiday season just past, ribbon sales were very large so that the outlook for the spring is favorable for good sales to retailers. Little in the way of a definite style trend has appeared during the past year, demand covering a wide range with the narrower types favored as in the past. Aggressive propaganda may serve to popularize once again the wider qualities but the wide ribbons have not sold in large quantities in the past twelve months and indications as the year opens do not promise much for the spring.

Mills Use Over Half Million Bales Raw Silk in 1925

Tremendous Consumption Feature of Market During Past Year—Fluctuations Held at a Minimum—Japan Grades Slip Another Notch While Cantons Deteriorate Likewise—Close of Year Finds Market in Strong Position

EXTREME fluctuations in the price of raw silk were lacking in 1925, but the year made history in another and more satisfactory way. While fluctuations were small, consumption was large, extraordinarily large. Over a half million bales of raw silk were delivered to the mills in this country during the year 1925, a total which exceeds that of any previous year by 135,000 bales. Just what a consumption of 500,000 bales implies in the way of full time operations in the mills and sales of silk goods can better be judged when it is realized that within the last decade a consumption of 200,000 bales represented the maximum.

Minimum Fluctuations

Second only to the extraordinary jump in consumption in point of interest, is the way the market behaved from a price angle. Fluctuations were held at a minimum all through the year with Best No. 1/X maintained in a range between $6.00 and $6.90. This represents a variation of less than 15% which compares favorably with pre-war years when quotations held within a 10% to 12% range for the entire 12 months. Compared with the war and post-war period, the change is striking in its evidence of returning stability. Annual fluctuations of $3 a pound, $5, and even $12 a pound have been noted in the period from 1918 through 1924. It is clearly evident that the whole industry has returned to a more normal basis when raw silk which has been notorious for its rapid and wide price changes can hold within a small range of 90c as was the case in 1925.

There are two more important reasons to account for the change. A year ago in the TEXTILE WORLD'S Annual Review, it was pointed out that the decline in the exchange value of the Yen had removed one of the chief barriers in the way of a large and satisfactory importation of raw silk. The fact that the gold parity of 50.00 did not represent the true exchange value of the Yen during the years 1920 through 1923, was emphasized. Artificially to maintain exchange at the gold parity, placed difficulties in the way of the export trade and raw silk as the largest export commodity, naturally experienced the greatest portion of this difficulty. Wide fluctuations were inevitable in any such unbalanced state of affairs. The prediction was made in these columns a year ago that the decline in the Yen noted during the first half of 1924 would tend to make the fluctuations during the year 1925, very much smaller. How well this has worked out can be judged from the 90c a pound range between the high and the low point.

Pinch in Cantons

Canton silks proved to be something of an exception to the rule, however, the New Style 14/16 grade for instance showing a variation of almost $2.00 a pound. Selling on a lower price basis than the Japan silk, this is all the more unusual, but the reason is not difficult to locate. The strike at the port of Canton that tied up all shipping and stopped exports of Canton grades entirely for a month or more, was responsible for a sharp rise of $1.00 a pound during July. At this time there was a definite scarcity of Cantons around the New York market at a time when many mills were just beginning to use them in a liberal way for the fall season. In August when the situation assumed its most serious phase, as high as $6.60 was paid for small lots of 14/16 Canton for spot delivery. As soon as shipments were resumed from Shanghai however, prices melted away and by the close of the year this grade was available again at the more normal level of $5.40.

Italian silks and Shanghai Steam Filatures are used by such a small percentage of the trade that the price trends in these grades are of no great importance. Through the greater part of the year, prices as far as the American manufacturer is concerned were more or less nominal. For a period in the spring Italian grades were available on a competitive basis and a substantial quantity was sold. During March and April Grand Extra Classical (Exquis) could be contracted for in a range between $6.40 and $6.65 and Extra Classical proportionately lower. Many of the larger manufacturers took advantage of this opportunity to contract for large quantities and to cover deliveries for many months ahead. The Italian filatures had instructions to reel most of this silk in size 20/22, and it is possible that this relatively large quantity of Italian silk reeled in the warp sizes had something to do with the discounts on the Japan 20/22 size through the entire balance of the year.

High Monthly Consumption

The raw silk statistics for the year

Looking Ahead We See—

Strong statistical position of raw silk.
Large sales of finished goods.
Reduced amount of raws available for import.
Steady prices in first half of 1926.

Looking Backward We See—

Record consumption of raws in 1925.
Minimum fluctuation in prices of Japans.
Cantons take sharp rise.
Italians quiet after March-April activity.
No reserve stocks built up in U. S.
Active mill operation.
Decline in Japanese raw silk quality.

INCREASED SALES!

Considering the extent to which *our Colored Spun* Silk increases the salability of woolens and worsteds, its use for decoration is an investment that pays rich dividends.

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are extremely interesting, reflecting as they do a record breaking year in more than one direction. Consumption, as indicated by mill deliveries, amounted to 501,343 bales or an average of 41,779 bales a month. In 1924 the mills took an average of 30,590 bales a month, and in 1923 an average of 29,860 bales. This unusual gain reflects naturally a year of high operations through the trade with hosiery and broadsilk mills running two and sometime three shifts a day. In eight months out of the twelve, consumption exceeded 40,000 bales while the lowest takings, in February (a short month with two holidays) amounted to 37,500 bales.

No Reserve Stocks Built Up

Total importations during 1925 amounted to 489,634 bales as compared with 387,675 in 1924, the highest total previously. The average monthly imports amounted to 40,800 bales. Warehouse stocks at the end of December 1925 amounted to 49,825 as compared with 61,530 bales on Dec. 31 of 1924. Warehoused stocks have increased only moderately over the second half of the year, 44,000 bales being held on June 30 and 49,800 at the close of the year. The principal reason that stocks have failed to show their usual sharp increase over the fall months has been the tremendously high rate of consumption which has precluded any attempts to build up reserves without running the risk of bidding for quantities available in Yokohama and bringing about a too rapid advance. Another factor, too, has tended to make importers hesitant about building up stocks, and that has been the advancing trend to the Yen exchange over the last three or four months. A better balanced trade position has brought about a steady rise in the Yen from below 40.00 to 43.50. Importers could not take a speculative position except by covering exchange in advance and withdrawing from the raw market which would have the effect of keeping prices in Yokohama down. In addition it would prevent an accumulation of silk in New York and place the burden on holders in Yokohama. The latter, by the way, have been in a better position to carry a substantial stock in Yokohama and Kobe. Interest rates have been lower and warehouse facilities have been vastly improved in the two and a half years that have passed since the earthquake.

First Half of 1925

The year began with crack 13/15 silk quoted in the neighborhood of $6.90 a pound and Best No. 1/X at $6.60. The heavy forward buying noted during the latter half of December, however, had apparently put the manufacturers in a well covered position and little buying was done during the first half of the month of January. Business in finished silks was satisfactory, but mills found it difficult to advance prices to bring them into line with the raw market. The market turned weak at this juncture and prices by the end of the month had declined about 25c a pound. Beginning February in good shape, having liquidated a portion of their inventories, mills came in the market at the decline.

Heavy buying made its appearance with a good quantity of forward business placed. The market again turned strong and advanced once more to the previous high point of close to $7.00 for crack 13/15s, where it held for two weeks. The announcement of the failure of Takata & Co. late in February dropped a bombshell into the contented, peaceful picture. This development was unexpected in most quarters and was a severe blow to confidence. At the same time, it was generally realized that the difficulties of the concern were entirely a result of losses sustained during the earthquake, so that following the first quick judgment, there was a disposition to minimize the whole matter. The market, however, began to decline and under the weight of actual liquidation and a considerable burden of short selling, prices gave way rapidly. On the basis of $6.60 for crack 13/15 silk some speculative buying made its appearance after two weeks of decline. This was not sufficient to halt the downward trend, and several large importers sensing an opportunity to make substantial profits continued to offer large quantities of silk under replacement parities which prevented renewed buying in Yokohama.

The decline continued through March, crack 13/15s reaching a low point of $6.30 by the end of the month. Manufacturers in this country were at loss as to what to do, viewing on the one hand an extremely satisfactory condition in this country and large sales for export in Yokohama, and on the other hand experiencing a loss of confidence brought about by the continued unexplained weakness in prices.

Early in April the strong features of the situation began to exert an influence and a number of larger buyers impressed by the strength of the statistical position and the prospects for a large fall season, began to accumulate a long position. This stayed the decline and a little later prices firmed up with the underselling on the part of certain houses entirely eliminated. Crack 20/22 silk which had been available at close to $6.10, moved up to $6.30 with little apparent change in the Yokohama market. During May business was mostly of a hand-to-mouth nature with the larger houses continuing to build up stocks in anticipation of a scarcity of good silk during June and July.

Fall Business Active

The certainty of a very active fall season caused a wave of forward buying late in May and during June with many mills covering July, August, September requirements. Prices advanced to $6.75 for the top grades, but developed some irregularity later on reports that the coming crop would show a large increase. Actually the spring crop as estimated by the Sericultural Association of Japan showed an increase of approximately 8%. Considering the large increases in consumption this was not considered bearishly, but there was at the same time the likelihood that the summer and autumn crops, in line with the tendency of recent years, would show a much larger increase.

Buying continued active through July and into August but the possibility of the large increase in the two later crops together with the expectation that business would slacken up following the fall season, kept prices on an even level in the neighborhood of $6.70 for Crack 13/15s. Toward the latter part of August there developed a growing conviction that there would be no halt in the tremendous consumption of raw silk, but that pointing to a record spring season manufacturers might further speed up production. A buying movement set in at this time that sent cracks to a new high level for the year above $7.00.

This level proved to be permanent and over the last quarter of the year, the market held within the small range of 20c a pound. Manufacturer buying over this period has made its appearance every time that prices have advanced and has withdrawn as prices showed a tendency to advance. The situation, moreover, has favored a stable basis. Many fabrics have been moving well over this period, but much of the manufacturing activity has been in the nature of anticipating the spring season. Substantial stocks of finished silks, moreover, have made it difficult to obtain advances which in turn has restrained mills from speculative buying of raw silk.

The advancing trend to Yen exchange, moreover, has held in check any speculative movement as far as the Yokohama market is concerned. Following a series of small advances and declines, the raw market definitely registered its confidence in the coming spring season by advancing to well over $7.00 for cracks with Best No. 1/X held above $6.85 as the year closed.

Quality Again Slips

While the trade in this country has had little reason to complain as to the price phase of the market, there have been numerous complaints as to the quality of the Japanese raw silk. Mills that found Crack XX good enough for certain purposes during 1922 and 1923, have been forced to buy Grand Double Extra with much of the silk that is currently called Grand Double Extra testing merely as a Crack or a Double Extra. Late in 1925 a new grade was introduced, the Triple Extra, to designate the highest quality silk obtainable in Japan, but it is significant that this Triple Extra fails to come up to expectations in many instances. There must be some reason for the continued complaints, and it is a matter of cold, hard fact that some of the larger manufacturers have been forced to discontinue entirely certain numbers because of the impossibility of obtaining silk of sufficiently high quality.

Probably the tremendous demands made upon Japan to increase the quantity of silk reeled has forced a lowering of quality. This would be the natural outcome of the necessity of speeding up production. In that event improvement in the question of quality will have to wait until the market slows down again. When this happens the filatures will be in a position to reel the silk with more care and there will be, moreover, the desire to please once again an exceedingly good customer.

The Outlook

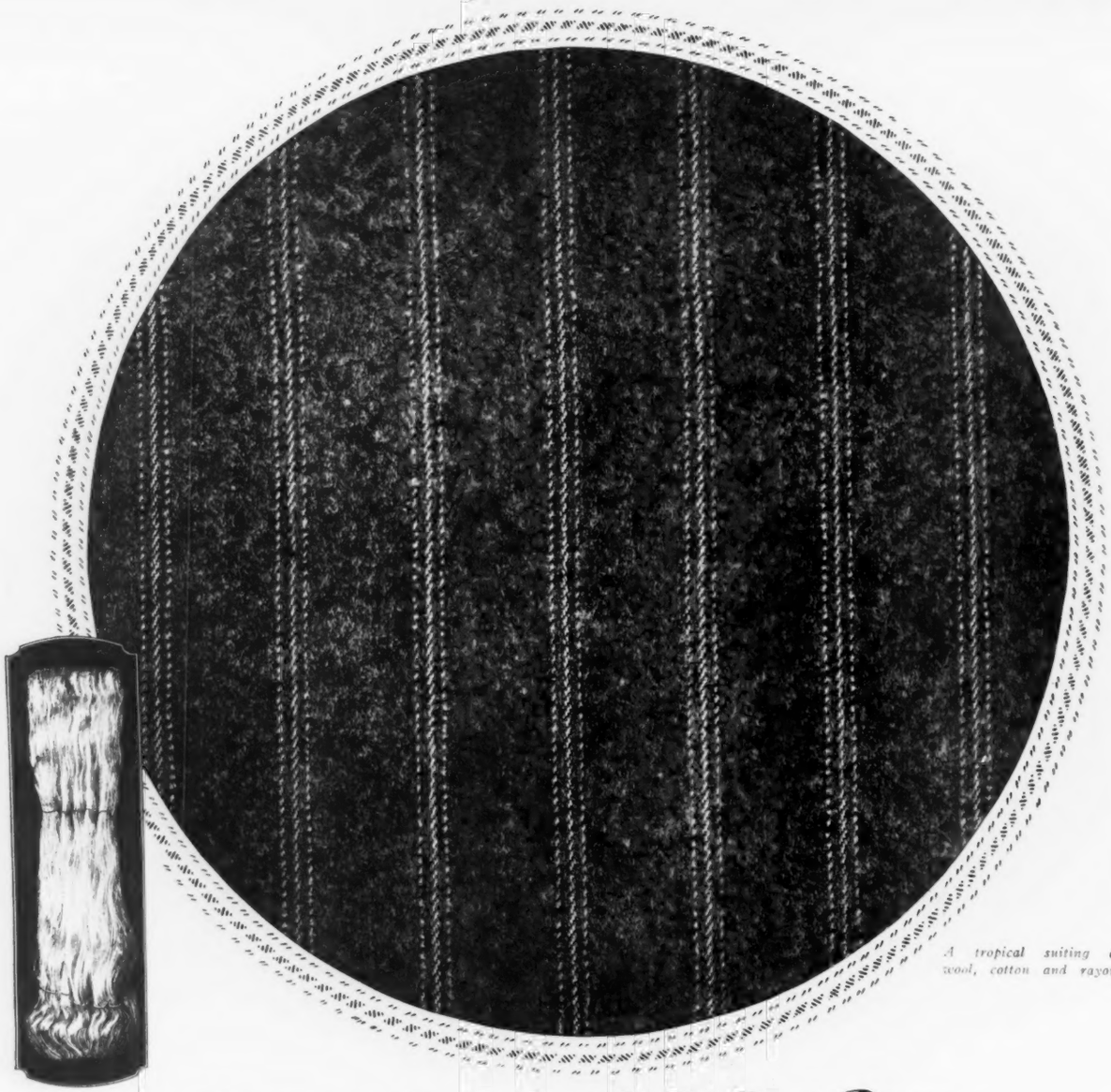
Coming to the second half of the crop year of 1925-26, the outstanding fact is the strong statistical position of the fibre. Exports of Japan silk over the first half of the crop year have been very large, so large in fact as to make it probably necessary to reduce the quantity exported in the first half of 1926. In this country the outlook is for large sales of silks during the first half of the year 1926. Adequate preparations have been made for a large season so that it is questionable whether manufacturers will embark on any frenzied manufacturing program at this date. Despite a soaring stock market, commodity prices have so far given no indication of inflation and it is questionable whether they will do so. Raw silk is hardly likely under the circumstances to go very much higher than it did during 1925. The outlook would seem to be for a stable, fairly steady market during the first half of 1926 with a slight tendency to lower prices held in check by the strong statistical position.

Spun Silk Use Expands in 1925

Continued Popularity of Tub Silks and Satins Accounts for Increased Consumption—Prices Advanced

IN common with other branches of the silk trade, spun silk enjoyed a very prosperous year during 1925. Consumption was large all through the twelve months and spinners found it necessary to speed up operations to keep up with the demand. There was no slack period and even slightly larger imports of schappe did little to mar a very satisfactory year. Prices were very firm all during the year with the exception of a short period in the latter part of the spring when a declining trend was noted. This decline was soon stayed, however, and the balance of the year witnessed an almost uninterrupted advance. At the close of December quotations were from 40c to 50c a pound higher than at the outset, the advance caused by the higher waste silk prices.

It would not be going too far to



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characterize 1925 as the most profitable and successful year since 1919. The previous year, 1924, marked the turning point and the improvement noted during the second half of 1924 continued into 1925 and following a small recession in March-April, sales and production have expanded steadily right through the year. One difficulty that spinners have had to contend with has been a steadily rising trend to domestic and foreign waste silk prices but they have been able to offset this to a considerable extent by advances in prices for finished yarn. The higher prices have naturally made it more advantageous for foreign spinners to compete and imports will show an increase over 1924 although still far below 1921 when this competition assumed its most serious phase.

The primary factor accounting for the prosperous year that spun silk producers have experienced, is, of course, the extraordinarily active year that silk manufacturers have enjoyed. Consumption of raw silk and silk yarns during 1925 has far exceeded any previous twelve months period in the history of the trade and spun silk naturally noted its proportionate share of the increase. Fabrics employing spun silk in their construction have been popular, with the striped broadcloths and tub silks extremely successful through the spring and summer and promising much for the coming spring. Satins were also very good for the spring and fall seasons although quieting down in the last quarter as they are not normally a spring fabric.

Opening the year on the basis of $6.00 for the 60-2 yarns and $4.75 for the 60-1, the market noted a very fair filling in demand during January and February which forced prices slightly above these levels, say 10c higher. The larger users were fairly well covered as far as the spring months were concerned, having placed their large contracts somewhat earlier. So very large, however, was the demand for the broadcloths that it necessitated additional buying on their part during these months, which, combined with new business received from smaller mills, accounted for the small advances noted at the time. Satins and charmeuse while not normally a spring material proved very good at this time and the single yarns came in for buying that would not unusually be noted until somewhat later in the year.

Conservative Attitude

A rather sharp decline in the raw silk market in March, however, brought some hesitation. Despite sales of the broadcloths, tub silks, and charmeuse that exceeded even those noted in 1924, the trade adopted a very cautious attitude as far as their raw materials were concerned. They were enabled to do so because most of the larger firms had large contracts placed for spun silk to cover through the balance of the spring season. The market weakened and declined in April to the basis of $5.75 for the ply yarns and $4.50 for the singles. Spinners were unwilling to go under this basis because of the strong tone to the waste markets and the prospects of continued activity in silks generally. Some tentative orders were placed on this basis and in May the larger houses came in the market in a very large way placing contracts against fall requirements in the singles and still further ahead in the ply yarns. At the attractive prices prevailing, aided by a lower exchange some unusually large business was placed in schappe likewise. In some cases it was reported that deliveries against contracts would run into 1926.

Both broadcloths and tub silks moved easily during the summer, and for the fall the satins again proved extremely popular. Spun silk benefitted by this condition and prices strengthened. Through the fall months the market has been firm to strong and reactions have been merely nominal. In November ply yarns sold as high as $6.60 and singles at $5.25 but a slight reaction in December as the year closed was responsible for some shading which left the final levels at $6.40 for ply yarns and $5.10 for singles.

Ply Yarns Popular

Through the year, the ply yarns have been by far the more popular number. Charmeuse and certain qualities of schappe filled satin crepe have enjoyed exceptional popularity but cannot compare with the tremendous yardage consumed in the washable broadcloth and tub silk qualities. At the close of the year the outlook for the wash silks was for another big season while satins are rather quiet which accounts for a corresponding lack of interest in the singles.

Imports during 1925 showed an increase over those of 1924. In 1925 imports will total about 1,450,000 lbs. (December estimated) of which about 80% will be ply numbers. During 1924 approximately 1,200,000 lbs. were imported while in 1923 the figure was 1,475,000 lbs.

The Outlook

The present year at the moment gives promise of being satisfactory while not up to the mark set during 1925. Consumption will in all probability come close to that of the past year but other factors are likely to complicate the situation for the spun silk producer. The question of competition from Europe must be considered and this in all likelihood will be more severe than experienced in 1925. The low level at which the franc is selling should permit some interesting quotations when the larger users in this country are once again interested in placing business. Then again there must be considered the question of raw materials, in this case waste silk, which has been steadily rising through 1925. Domestic waste for instance which could be bought at $1.10 a pound at the beginning of the year rose as high as $1.45 a pound and is currently quoted at $1.35 to $1.40. Foreign wastes have also advanced and certain grades of Canton Steam waste have been scarcer than heretofore owing to the interruption of production during the summer and fall. The exceptionally large crop of Japan cocoons this year holds forth hope in this direction, however, and increased importations of Japan waste grades may result.

Rayon Prices Unchanged in 1925

By William E. Spafford

PRICES for rayon yarns fluctuated moderately last year and in spite of a tremendous growth in demand that forced producers to the expedient of rationing their customers over a great part of the year, the price basis was maintained unchanged throughout. Though the major part of the rayon sold during the year was contracted for at producers' list prices, moderate fluctuations were observed in the spot market which, in the absence of week to week changes in the more important producers' market, to a certain extent takes up the slack between supply and demand. Measured by the yardstick of the resale and jobbers' prices, rayon demand exceeded the supply through the greater part of the year.

The calm, impartial judgment of the leading spinners of the synthetic fibre has had much to do with the tremendous prosperity that the industry has enjoyed over the past several years. A stable price level has aided considerably the growth in the use of rayon by consuming industries in this country. Just how relatively important in the mind of the user is the absence of fluctuations, is difficult to measure but it undoubtedly has been a factor. During 1925 the price control exerted by the leading producers has aided enormously in promoting the increased use of rayon. An analysis of the market during the year will indicate in just what manner the decision to keep quotations stable throughout the year has been of benefit to both sellers and consumers.

Situation at Beginning

At the outset of 1925, the situation in the rayon market was an extraordinarily strong one and favored the seller. It will be remembered that, following the depressed conditions of the spring and summer of the previous year, 1924, the situation improved steadily through the fall months. While consumption was reduced during the earlier part of the year, producers had accumulated substantial stocks of the popular sizes and grades in anticipation of the improvement sure to come. The increased consumption during the latter half of the year found the larger firms in a position to care for the increase in use but so tremendously did sales expand that by the end of the year, reserve supplies were entirely cleared up. Over this period then it is evident that demand was actually larger than current production.

This period has been considered because it makes clearer what has taken place during the past year, 1925. Beginning 1925 then, we find that the various classes of users such as hosiery, knit goods, and cotton were consuming more rayon than was being turned out. Moreover, it is not the matter of a few weeks or months to provide new plant facilities with which to take care of the increased call for rayon. The opportunity that presented itself at the time was without question a tempting one, for sellers could very easily name higher prices for the second quarter and sell their entire production.

Through January and February prices grew firmer and firmer in the spot market with jobbers and retailers obtaining without any trouble premiums, first of 10c per lb., then 20c, and in some cases even higher. Sizable quantities for spot delivery were difficult, not to say impossible, to find. In announcing quotations for the second quarter, producers sternly turned away from temptation and kept them unchanged. This move undoubtedly required courage and clearly pointed to the judgment and foresight of the leaders in this new industry.

The Price Motives

The reasoning that prompted this move is not difficult to follow. In the case of the other textile fibres, price represents merely an adjustment of demand to supply. World conditions of supply are first considered and prices then represent a speculative attempt to correlate this with demand. Higher prices inevitably bring about a marked reduction in demand while lower prices increase it. The position of rayon, however, is somewhat different. Supply can be controlled within certain limits without difficulty, whereas in the case of cotton and wool, millions of individuals depend for their livelihood upon their own individual output which they must of necessity go on producing. Then again rayon producers are more concerned with increasing the consumption of the fibre which can best be done by keeping prices unchanged or lowering them.

To have raised prices for the second quarter would have put an immediate check upon consumption without increasing by a single pound the production of rayon. Their own increased facilities would be available a little later on by which time the higher levels would have had the effect of decreasing the use at a time when they were desirous of expanding it. The most sensible policy to follow would be to maintain a stable basis and endeavor to limit consumption by the expedient of rationing their customers, which is what they did. How well this policy of price stability has succeeded can be judged from the strong position that the industry enjoys at the end of the year.

Throughout the entire balance of the

year sales have been steadily growing. During June there was some contraction and the premiums that had featured the markets were very much smaller than previously or did not exist at all. During the third quarter improvement in hosiery and cotton was responsible for a marked increase in consumption on the part of these users, while knit underwear, which had been assuming more and more importance right along, assumed still greater importance. Premiums reappeared but not to the extent that was noted in the first quarter. The situation until November was very strong, however, and was the cause of a marked increase in the importation of rayon from the Continent.

Import Situation

The import market has always been closely watched and fears of a deluge of imported rayon were partly responsible for the cut in prices early in 1924. Since then, however, the imports have not caused much concern despite an enormous increase in plant facilities on the part of Italian, German, and Swiss concerns. Europe has had difficulty in satisfying the demand that existed within her own borders and the new British tariff caused a rush to get all available yarn into Great Britain through the first six months of 1925 that taxed the capacity of Continental plants. Over the second half of 1925, however, the situation has changed somewhat. First of all the rush to get yarn into England before the tariff has subsided releasing large quantities for other markets. On top of this comes the fact that the British market has been lost to a certain extent because of the fact that Great Britain is enjoying a boom of her own in the field of rayon production. Home markets in the other countries of Europe are using decidedly smaller quantities of rayon in addition—all of which causes Italy, Germany, and others to look with longing at the American market.

In spite of difficulties, as pointed out above, in the first half of the year, 1926 will probably see over a 200% jump in the imports of rayon into the United States. Were it not for the fact that for many uses the imported rayon is too low in quality, this quantity would undoubtedly be even larger. In any event it is likely that spinners in this country glance with apprehensive eye at the expansion programs of certain Italian and German concerns.

Close of Year

In the latter part of November and the major part of December the whole situation showed a weaker undertone and offerings of resale lots on the part of hosiery users principally caused prices to sag momentarily under producers' levels. This sagging was only in the "B" and "C" qualities and to a certain extent was attributed to the increased use of the highest grade. By the end of December these offerings had disappeared and, based on producers' estimates there was the expectation that during the first quarter it might again be necessary to ration customers.

Although the whole situation at the close of the year appeared very strong with stocks small and consumption on the increase, there was a tendency to pass over the favorable indications and lay stress on the unfavorable. Putting the matter plainly, most users of rayon look for lower prices to be announced sometime during 1926. A commonsense, unbiased opinion would support this conclusion. Any contraction in business during the second half of 1926 would make it necessary to step up demand and the one sure way of doing this would be to reduce prices. Because of the American user's insistence upon quality it is not thought that the foreign yarn will be a big factor in 1926. Lower prices are more likely to result from the desire of the larger producers in this country to further expand the consumption of rayon so as to take care of increased facilities to produce the yarn. This readjustment, however, may be delayed a somewhat longer time than is generally expected at present.

Outlook for Rayon Consumption

IN order to present a composite forecast on the outlook for rayon consumption during 1926 in the various branches of the textile industry, the individual market editors of TEXTILE WORLD have prepared the following reports, reflecting their opinions so far as their particular fields are concerned.

Cotton Goods

"It is practically impossible to make definite statements regarding future rayon consumption by the cotton goods field. Present indications are that this branch of the textile industry will materially increase its takings of rayon during 1926; it is estimated by some that cotton goods manufacturers will this year be the largest consuming class in this country. The Viscose Co's. figures, which we published, showed cotton goods as taking 26% of its entire production in 1925; second only to hosiery, which took 28%.

"The whole question is one of style values, however. Some of the shrewdest merchants I know are not yet sold on rayon in cotton goods."

* * *

Knit Goods

"Hosiery: There is no question about a big market in this branch for as many years ahead as we can see. Because of the large quantities of rayon now used by hosiery manufacturers it is probable that the next few years will not show big jumps in percentage of consumption, but there should be steady, sizable increase in poundage each year.

"Underwear: This field will undoubtedly expand from year to year, consistently, but hardly at the rapid rate which has been predicted by enthusiasts. Rayon underwear is not all that it is cracked up to be; its use will expand as the quality of the fibre itself is improved.

"Outerwear: The future depends upon style movements in the major branch of this industry—sweaters. Women's sweaters have been 'out of style' for about two years now; hence the big drop in rayon consumption shown in the Viscose Co. figures for 1925. It is safe to predict that outerwear consumption of rayon will increase in 1926, not only because of slightly improved style outlook for women's sweaters, but also broader market in other divisions, notably knitted piece goods.

"The possibility of a return to popularity almost overnight of women's sweaters as a style proposition is one of the very important underlying features of future rayon consumption which I have not seen mentioned in recent discussions."

* * *

Wool Goods

"In the wool goods field rayon is used for two distinct classes of effects: As a decoration, carrying a touch of contrasting color and luster through a woolen or worsted fabric; or, as a mixture in the body of a cloth made either by use of rayon and worsted yarns in warp or filling, by use of a ply yarn of worsted and rayon in twist, or by a stock mixture of rayon (probably rayon waste) and wool prior to spinning.

"The use of rayon as a decoration is economical because of the multicolor effects possible in piece dyes, because of the different dyeing properties of wool and rayon. In women's wear this was largely exploited last fall in lines for spring but distribution is limited by the extent to which fashion takes hold of these distinctive effects. This sort of decoration was pushed on the cheaper lines and for the moment seems to have reached a limit. It will gain, or fall into the discard, depending upon consumer support at retail this spring. The outlook at present is for no further expansion for this class of use this year, and in the long future it will rise or fall with the demand for the cheaper sorts of decorated fancies. Individual mills may make individual successes of these lines because of skill and originality of designers in adapting the rayon decoration to consumer needs. In men's wear rayon decorations have a place in the cheaper goods, particularly tropicals, which though narrow may be expanded by careful promotion. Cheap men's wear fabrics may be given a dignified decoration without greatly increasing their price; while the same effects with silk would be too expensive. In the higher grades of men's wear where silk decorations have been the thing in the past, there is great reluctance to take up rayon and since the amounts used are small the saving in price is of little account to the manufacturer and the acquisition of this type of business of little effect on the bulk business to be done on rayon in the future.

"The use of rayon in uniform mixtures through the body of a cloth has given to the women's wear trade a new note, and sellers and stylers believe that great possibilities lie ahead in this field. The new elements are to be found in the bloom or sheen of such fabrics and in subtle color effects which may be produced. The resulting cloth, however, has a staple or semi-staple effect which may make it the foundation on which fancies may be built in fancy seasons or which may be used alone when staples are in vogue. It is adaptable to any weave and is found in sheer reps and fine twills as well as in coarser woolens and tweeds. This use has a high degree of permanence, sellers believe, and may be expanded as it grows in favor with the consumer, and as manufacturing skill increases. As many and various effects may be produced, this use is not tied down to a whim of fashion. While lustrous coatings on the bolivia order are in demand, rayon will have a field for use as the surface pile, though complaints as to lack of service are current. It is said that the pile crushes easily and that it is prone to show spots. Call for such coatings will probably carry through for a number of seasons, and the effects possible with rayon-face goods can be approached only by the use of much more expensive materials, such as cashmere wool; consequently while there is demand for popular priced coatings of the lustrous bolivia type, rayon will have the call, and the future rests on solving the problems of crushing and spotting rather than by substituting other fibres."

* * *

Silk Goods

"During 1925 the actual consumption of rayon by broadsilk and ribbon mills increased only slightly. The figues of the Viscose Co. show that during 1925 silks used 16% of their production as against 18% during the previous year. Taking the ratio of the sales of the Viscose Co. as indicative of the experience of the other producers silks used approximately 8,500,000 pounds of rayon during 1925.

"In comparison with the increases recorded by other industries rayon lost ground in the silk industry. Considering also the unprecedented activity in the silk trade and the high rate of operations of silk looms, the small increase in the consumption of rayon is all the more notable.

"Over the past ten years silk mills have carried on rather exhaustive tests and experiments with rayon. Silk mills have been using rayon for a considerably longer period than the cotton mills for instance, and their present consumption probably represents a fairly good estimate of its possibilities as an adjunct to the production of silk and rayon fabrics.

"Two or three years ago many mills attempted to turn out the staple crepe fabrics that comprise such a large proportion of the industry's output, with a percentage of rayon in them. These experiments proved to be

thing but a success and were eventually dropped by a vast majority of the mills. At the present time rayon finds its largest use in the field of novelty fabrics and in certain types of cheaper ribbons. As for using it in staple crepes, which account for by far the biggest proportion of the silk trade's output, it has been tried and found wanting. To change the situation in this regard will necessitate either further improvement in the nature of the rayon yarns or very drastic price cuts.

"During the coming year, it is probable that the consumption of rayon by the silk trade will decline both actually and relatively. It will decline relatively because other consuming industries are expanding their use of the synthetic fibre much more rapidly than silk where it seems to have found its permanent level. It will probably decline actually because of curtailment in mill operations on the part of silk manufacturers during the second half of the year."

American Bemberg's New Plant in Tennessee

Rapid Progress Being Made on Construction of First Unit Near Johnson City to Produce Cupro-Ammonium Yarn

By S. B. Lincoln
Of Lockwood, Greene & Co. Engineers, Boston

IN April, 1924, representatives from the two largest artificial silk companies in Germany visited this country to take up with American bankers the establishment of a separate American factory.

The companies represented were the Vereinigte Glanzstoff-Fabriken A. G. of Elberfeld, Germany, and J. P. Bemberg A. G. of Barmen, Germany, the first mentioned company being a large manufacturer of artificial silk by the viscose process, and the Bemberg Corporation being the largest manufacturer using the cupro-ammonium process.

The following is a quotation from a circular issued in September, 1925, in connection with financing of the American company:

> "The firm of J. P. Bemberg was originally founded in 1792 as a dyeing establishment and enjoyed for more than a century a world reputation in the field of mercerizing and dyeing. Experiments with a new type of artificial silk of very fine fibre were first made about 1901. Lengthy scientific research and investigation was finally rewarded with the discovery of a method for successfully producing a commercially satisfactory product on a large scale.
>
> "Shortly before the beginning of the World War, the company gave up its dyeing and mercerizing establishment and concentrated wholly on the manufacture of its new product, Bemberg "Adler" silk. Since then the company has built establishments for the manufacture of artificial silk in Barmen, Ritterhausen and Oehde, which establishments have been continually enlarged and improved. Production for 1925 is estimated at 5,500,000 lbs."

The representatives of these companies visited several sites during April, 1924, and made a tour of inspection of this country, but arrangements for financing the American plant were not complete at that time and the representatives returned to Germany.

During the early part of the summer of 1925 the matter again became active, with the result that representatives of the two German companies above mentioned, together with their chemists and engineers, again visited this country and made an extended tour over a period of about six weeks, for the purpose of investigating a number of sites which had been proposed.

Site Selected

Included in the tour of inspection for the purpose of locating a site, was a representative of Lockwood, Greene & Co., Inc. After much study and consideration of a number of places, a site was finally selected immediately adjoining the Watauga River at a point about six miles northeast of Johnson City, Tenn., and a little more than one mile away from the city of Elizabethton. At this point a comparatively level site of about 100 acres was found close to the river and to the railroad which connects Johnson City and Elizabethton, known as the East Tennessee and Western North Carolina Railroad. A new concrete state highway connecting Johnson City and Elizabethton also runs in close proximity to the site, and at the present time the city of Elizabethton is completing an entirely new concrete highway running directly from Elizabethton to the site.

The Watauga River has a drainage area of 800 square miles above the site and will furnish an ample supply of soft water suitable for the plant requirements. The lines of the Hampton Springs Water Co. are also being extended to the site, this system being fed by springs which are said to have a daily flow of 10,000,000 gallons.

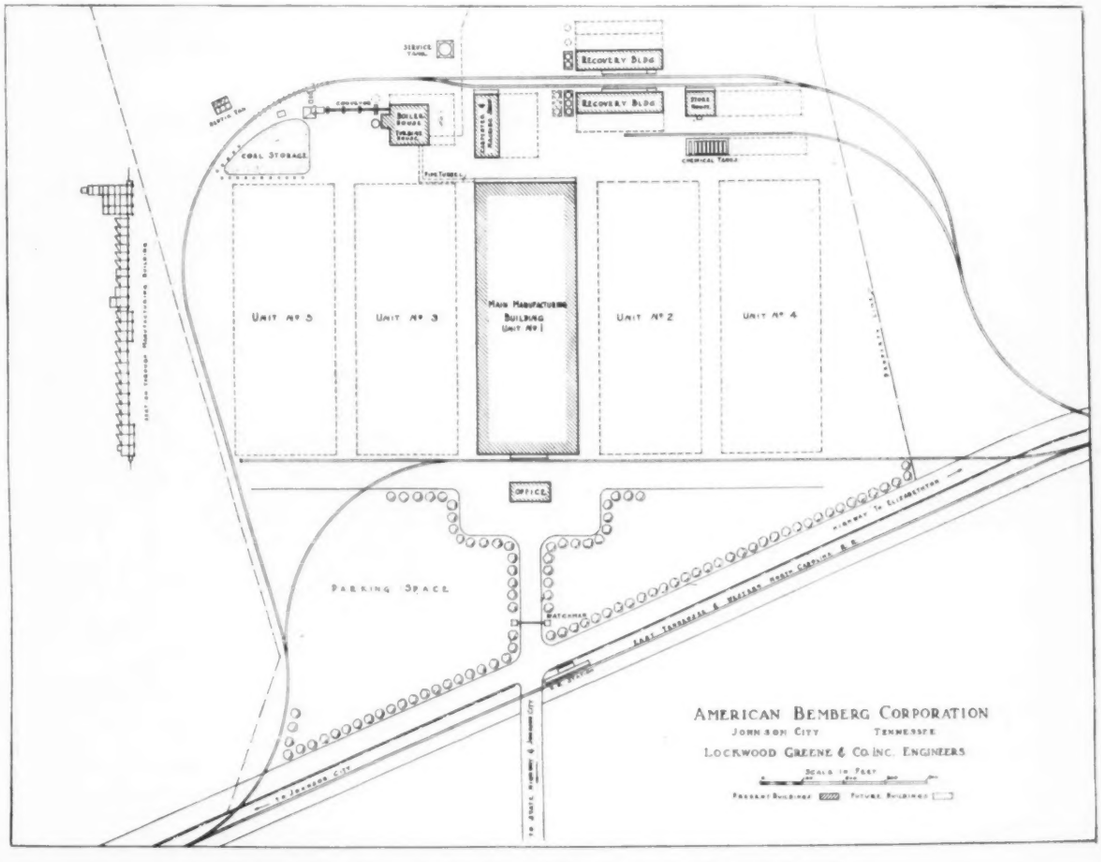
Financing

The American company was incorporated as a Delaware corporation in 1925, and the first announcement of financing was made early in the summer, at which time it was announced that a public offering of securities was being made in Amsterdam, Holland, and a preferred stock issue of $3,500,000, was sold.

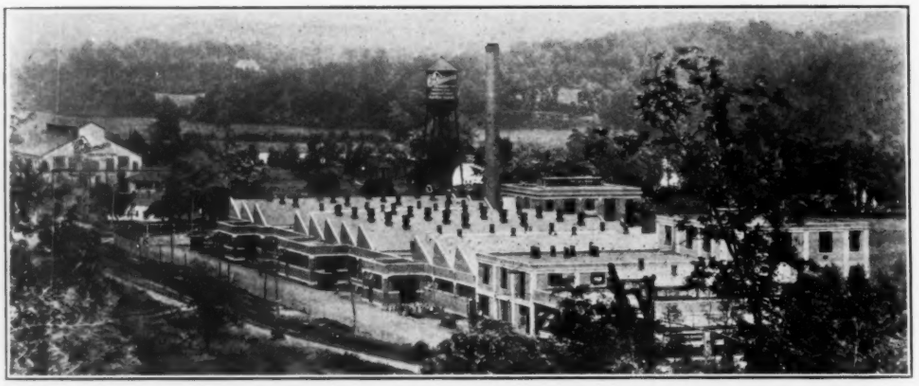
Plant Layout and Description

The general plant layout is as shown by the accompanying map which shows the first unit now under construction, with space for the development of four additional units of equivalent size.

The buildings will be modern in every respect, of brick, steel and concrete, and will have a combined floor space of nearly 400,000 sq. ft. A large power plant forms a part of the layout and the company plans to manufacture all of its own power. The plant location is only about 100 miles from the coal fields in West



Plan of New Plant of American Bemberg Corp. at Johnson City, Tenn.



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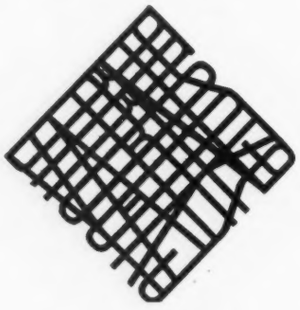


WOOLEN

RAYON

Virginia producing the highest grade bituminous coals, such as Clinchfield, Pocahontas and New River.

Contracts have been let for a filter plant installation adjoining the river, which will have an initial capacity of 3,000,000 gallons per day. The river not shown in this sketch is to the North of the plant.

The layout of railroad tracks is unusually complete and will furnish the best facilities for both inbound and outbound shipments. There is also included a coal trestle for the dumping of coal and a very complete system for the storage and mechanical handling of coal and ashes.

The buildings will be provided with the most modern systems for heating, ventilating and lighting for the comfort of the employes. Ample locker rooms and shower baths are provided and space for the installation of a cafeteria.

The estimated cost of the plant is about $2,000,000, for buildings, including, power plant and mechanical equipment of buildings. In addition to this the estimated cost of productive machinery equipment is approximately $1,000,000. A small part of the machinery will be shipped from Germany, but the greater portion will be purchased in this country, some of the contracts having already been placed.

Lockwood, Greene & Co., Inc., are acting as agents for the owners in the purchase of machinery in this country, under the direction of Max Korff, Technical Director.

Production

It is estimated that the first unit which is now under construction will have a production of 6,600 lbs. per day, or about 2,000,000 lbs. per year. A part of the plant will operate 24 hours per day while other departments will operate for one shift only and still other departments will operate in two shifts but not continuously for the 24 hours. It is estimated that the first unit of the plant will require between 1,000 and 1,500 employes.

Organization and Management

The board of directors of the American Bemberg Corp. includes representatives of the parent companies, as well as members of the banking firms of Teixeira De Mattos Brothers, Amsterdam, C. Schlesinger Trier & Co., Berlin, Speyer & Co. and Lehman Brothers of New York.

The officers of the American Bemberg Corporation are as follows: President and Treasurer, Dr. Arthur Mothwurf; vice-president and technical manager, Max Korff; vice-president and consulting engineer, Myron S. Falk; vice-president and secretary, Jacob Strauss.

The Executive Committee consists of the above men and: Herbert H. Lehman, of Lehman Bros., and H. Ruhlender, representing Speyer & Co.

Attorneys for the American Bemberg Corporation are Sullivan & Cromwell, New York.

The New York offices of the company are at 65 Madison Avenue, and Wolf, Strauss & Co. at the same address are the general selling agents for the company's product.

Lockwood, Greene & Co., Inc., are the engineers for the design and supervision of construction of the new plant. Contracts for the work are being placed through their New York office with the work being supervised from their offices at New York and Charlotte, N. C.

Progress on Construction

Excavating on the site was begun early in September and at this writing, in the first week of January, foundations for the main manufacturning building have been substantially completed and the erection of steel work is progressing rapidly. Railroad tracks have been installed and several hundred men are at work pushing the erection of the principal buildings.

The general contract for the construction of the buildings has been awarded to Hughes-Foulkrod Co. of Philadelphia, and the structural steel work is being fabricated and erected by the Virginia Bridge & Iron Co., of Roanoke, Va. Other contracts which have been placed include those for power plant equipment, for filter plant, for humidifier and air conditioning apparatus for refrigerating equipment and for fire protection, underground water piping, etc. It is planned to have the buildings substantially completed by the middle of the summer and to have the installation of manufacturing machinery completed early in the fall.

Additional European Plants

In addition to the new American plant, three additional units to produce Bemberg yarn are now under construction as follows: One in Italy, one in France and one in Cologne, Germany.

British Rayon Developments

(*Continued from page* 171)

is apparently likely to erect its plant in Ireland. The news is interesting in view of the developments now being made in the mixture of rayon with linen. A product known as "Celalinen" has been produced in Belfast for some time. *Viscosa Mfg. Co.*, with a capital of £500,000 is another company which has not yet made a public appearance. Among the foreign firms establishing subsidaries here, mention should be made of the German Vistra which is said to have raised a very large amount of capital privately. There are a number of smaller concerns, some of which are actually producing now and among these the following are prominent: *Lustrafil Ltd.*, a private company at Nelson in Lancashire directed by one of the leading cotton manufacturers, Sir Amos Nelson, and *Kemil Ltd.*, with a factory at Peterborough.

The whole country is being scoured for sites but owing to problems of water supply, these are by no means easily obtained. For obvious reasons, the neighborhood of Lancashire and Yorkshire is desirable and every effort is being made to utilize the available sites. A plant is projected at Huddersfield, as previously mentioned in TEXTILE WORLD. It is expected that the year 1926 will witness the flotation of more companies and the bringing to light of more definite information in regard to present ones.

During 1925 no fewer than 46 companies were registered in this country. It is to be expected, in view of the well-known difficulties, that a number of these will never reach economic production.

Courtaulds have a capital of £20,000,000. British Celanese, £6,000,000, Brysilka £250,000, Harbens £371,300 making a total of £26,621,300 to which must be added the potential producers shown above together with a number of companies who have not yet made a public issue.

Market Conditions

Rayon is being utilized in increasing quantities by all the leading manufacturers of cotton, wool and silk and as an indication of the demand it can be said that there are now over 200 Lancashire cotton firms utilizing the fibre in one way or another and the demand has increased by 800% in the last two years.

The trade is in a very healthy condition. Demand is not so severe as before and there is not great difficulty in meeting it now. Prices are steady and apparently likely to remain so for at least the first part of the year. The industry has had a very successful year and as a result a "boom" spirit has got abroad, which is not altogether healthy. It is certain that the financial success of 1925 cannot be continuous and as a reflection of this, it is a peculiar fact that the shares of the new companies have in some cases dropped very much below par since the allotment. The rayon industry, here as in other countries, will be dependent upon fashion's whims and while the basic demand for a bright and lustrous material at a moderate cost, is sufficient to guarantee a great future, it is not to be expected that all will be plain "sailing." Many of the new companies will have much with which to contend and such heavy charges as research work and depreciation of machinery, may weigh heavily against them. It seems possible that some of these companies will reach the production stage at a time when prices are falling and a very difficult period will follow.

Other Synthetic Fibres

Apart from the new "artificial wool" which is being introduced into this and other countries, an increasing demand is being made for staple fibre. This is produced by Courtaulds Ltd., and by a small firm known as Art-Silk Filaments Syndicate which has a factory at Runcorn in Cheshire. The Neura Art-Silk Co. mentioned above, is intending to produce this fibre but the most interesting development is the news that the German Vistra is to build a plant in England likely to be devoted to the production of staple fibre.

Machinery

The machinery for the new factories is to be of foreign make in some cases but the greatest enthusiasm is shown over the fact that contracts have been entered into with Dobson & Barlow Ltd., well-known textile machinists of Bolton, for the plant of the Western Viscose Factory and also for the British Visada Co.

The Name "Rayon"

The title "rayon" has not yet become popular in England and there is reason to doubt if it ever will. While its official use is more or less recognized, the basic fact remains that the word "silk" has a peculiar attraction and assists the sales of the retail shops. The British public is essentially conservative and it may be that "artificial silk" will remain in the shops and stores for many years. Many suggestions are made as to a suitable name. These are in most cases quite unworthy of serious attention.

Rayon Exhibition

A special artificial silk, or rayon exhibition is to be held in London in the spring and it is hoped that this will give an important fillup to the use of the material. New uses are being discovered as time goes on and in regard to the production stages it is anticipated that the inevitable competition will result in many new devices not only to reduce costs but to provide a more serviceable article. The tendency to introduce cheap lines of rayon is a very serious one and may bring discredit on the whole industry. In this respect it is anticipated that the British record for "Quality First" will be an exceedingly useful ally to the rayon trade as in other branches of textile work.

The Future

To sum the English position up, one might say that the year 1926 opens with every promise of success. The possibilities of the fibre present so many unexplored avenues that the exact course of the trade in the next few years is not easy to define. The larger companies stand in an exceptionally good position and any competition cannot possibly put them out of the running, however severe or prolonged it may be. Prices are steady but likely to fall and the trade is quite prepared. The influence of the British trade extends to practically all quarters of the world. The ideas of sensational success by any and all of the new companies is perfectly unjustifiable. Until an economic production stage is reached, they are a mere speculation although doubtless much money will be made by the lucky people in the matter.

How the Great Strength of Tubize
Benefits the Manufacturer

FEWER "SECONDS"

Breaks on your looms, occasioned by the use of artificial silk yarn of insufficient strength, do more than steal production time.

They multiply the number of knots and faults in the finished product. They swell the percentage of "seconds."

The use of TUBIZE, proved and acknowledged the strongest artificial silk yarn on the market today, materially reduces the frequency of such breaks.

It assures higher quality in the materials produced.

TUBIZE ARTIFICIAL SILK COMPANY OF AMERICA
Sales Office: 303 Fifth Avenue, *New York City*

Tubize

Artificial Silk at its Highest Point of Perfection

Making Du Pont Rayon at Buffalo

(*Continued from page 173*)

called "tumblers" and is mixed with carbon bisulphide to form cellulose xanthate, a soluble form of cellulose. These tumblers are not provided with agitators; they merely revolve slowly and permit a gradual and thorough reaction between the alkali cellulose and the carbon bisulphide.

Incidentally, in order to carry off the obnoxious fumes of the latter chemical, the "barrette room" is kept under pressure and the fumes carried off by suction through a specially constructed air-conditioning apparatus.

Dissolving the Xanthate

The soluble form of cellulose resulting from this operation is now dropped to the ground floor of the chemical building where it is passed to "mixers" and dissolved in a weak solution of caustic soda. These mixing tanks are provided with agitators—and in addition the liquor is continually pumped and recirculated through the material. This dissolving operation requires about six hours.

In order to insure even more complete blending of the resulting viscose solution, the charge from several mixers is passed to two delivery tanks, equipped with agitators, where they receive further mixing. After tests on the viscosity of the solution have been made, it is pumped to the textile building for spinning into rayon.

Rayon Spinning

Before spinning, however, this charge from the delivery tanks must pass through a long succession of aging tanks and filter presses where the viscose is purified and matured to the proper stage for coagulation into a filament. This series of operations is of vital importance in predetermining the qualities of the yarn.

The thoroughly aged and purified solution is now pumped to the spinning machines. These have been built by the DuPont Engineering Co., along the lines developed by its affiliated French concern.

An individual pump in front of each spinnerette forces the solution through a pressure gauge, into a small filter, where final purification takes place, and then into a small pipe and through the minute orifices of the spinnerette. These are immersed in a solution of sulphuric acid and niter cake which neutralizes the alkali of the viscose solution and coagulates it into fine filaments. The latter are caught up over glass guides and passed to large glass spools. Each spool receives the filaments from two spinnerettes.

So far as the writer knows, the DuPont Rayon Company is the only firm in this country utilizing glass spools or bobbins for this purpose. It has experimented with spools of other materials—and also with perforated spools, but thus far has found no reason to change.

A carefully maintained time schedule enables the operators of the spinning machines to know when the individual spools have received their quota of rayon. They are then dropped and passed to a wooden frame in the rear of the spinning machine where they are flushed with pure water for several hours. The compactness of this arrangement, whereby spinning and washing are combined in one machine, particularly impressed the writer.

Here, one important point must be emphasized. Under the "cake" system of spinning, the rayon filaments receive their twist in the spinning machine but under the spool system as used at the duPont Buffalo plant, the rayon leaves this machine without any twist whatsoever.

The wooden frames carrying the glass spools of rayon are removed from the rear of the spinning machines and transported into Proctor & Schwarz dryers, where they pass through three stages of drying and one of humidifaction. Next they are left in a conditioning room for 24 to 48 hours.

In order to prepare the yarn for the twisters, the glass spools are placed on DuPont-made machines which transfer the rayon to small spools. These are then passed to Scranton or Atwood twisters.

The ordinary DuPont rayon, comprising as it does 24 filaments to the 150 denier strand, receives 2½ turns per inch but the "super filament" yarn, containing 60 filaments in the 150 denier size, gets 7 turns per inch.

The twisted rayon is next passed to Scranton reelers, made by the Scranton (Pa.) Silk Machine Co., where it is transferred into skein form for washing and bleaching.

The two latter operations are conducted in one compact "wash and bleach" machine developed by the company's own engineering staff. The skeins are hung on heavy glass rods which are suspended across a slowly moving double chain drive. This carries the rayon through successive chemical and washing treatments. So slowly does it move that it requires about 4½ hours for it to complete the operation.

The skeins are then wrapped up in cloth bundles, hydro-extracted, dried in Proctor & Schwarz dryers, and passed to a conditioning room where they are brought to the standard condition of slightly under 11% moisture.

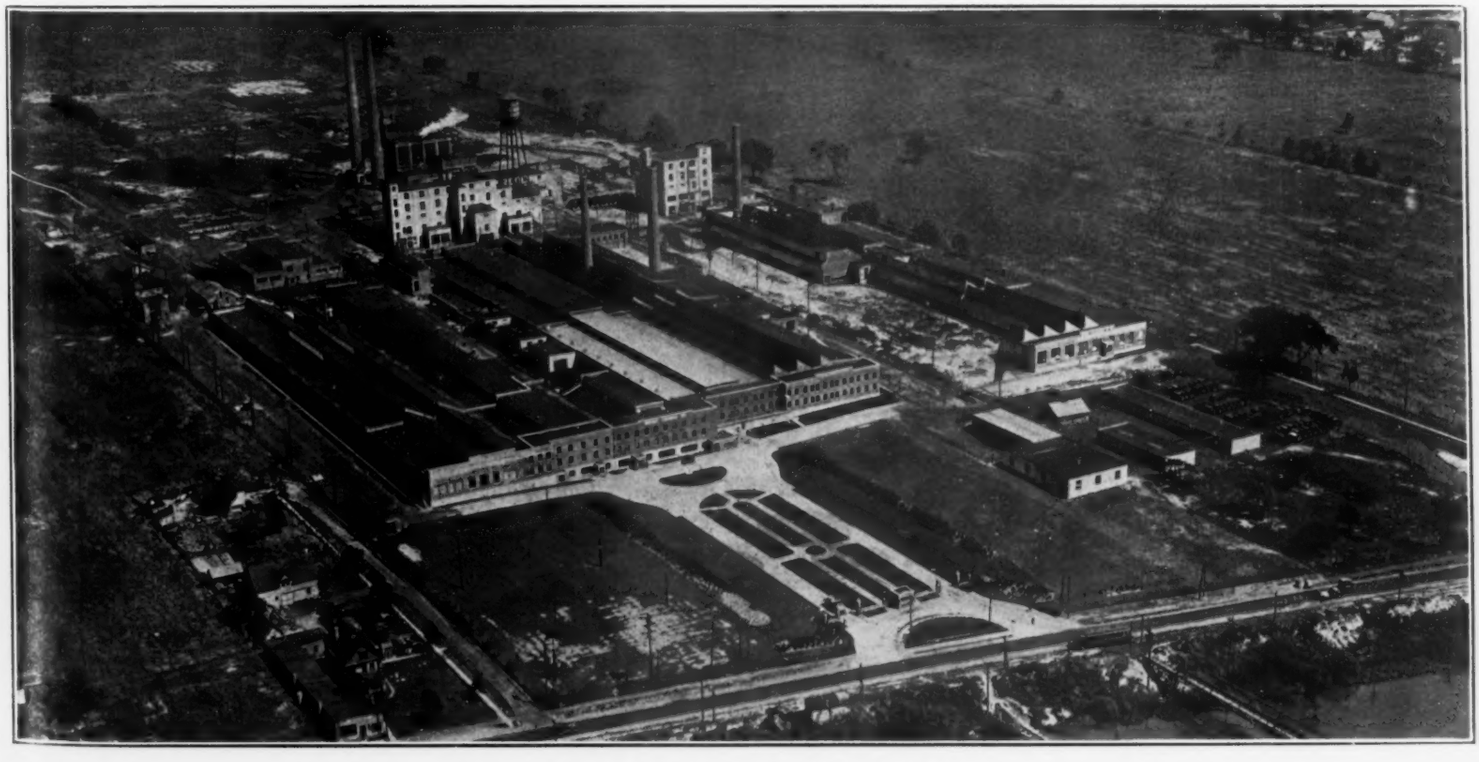
Part of the air-conditioning equipment in the plant was supplied by the Carrier Engineering Corp., Newark, N. J., and part by W. L. Fleischer & Co., Inc., New York.

Inspection

The final—and probably the most important—operation in the plant is the inspection of the finished rayon skeins. The DuPont company has made almost a fetish of this process.

This problem of inspection is largely one of personnel. A training school is maintained where apprentices are taught by trained workers. All the skeins passed by these novices are re-inspected before shipment and graduation into the inspection department proper is not possible until the new workers show entire proficiency.

Even then, they are not on their own. Payment in this department is on the basis of the number of pounds of rayon inspected daily by the individual. But paradoxically, this is in reality a quality and not a quantity basis. The maximum which any inspector can turn out has been set at 150 lbs. per day. Each person's work is subject to re-inspection—and if an operative in the 150 lb. class is found in error, she is demoted to a lower class—and at a lower wage per hour. Consequently, it is not a question of how many pounds she can inspect but how many pounds she can inspect accurately.



Plant of Du Pont Rayon Co. at Buffalo, N. Y.

SNIA-VISCOSA

CHEMICAL TEXTILES

IT IS to your interest to know that some of the Snia-Viscosa factories were among the pioneers in the production of Rayon, and gradually developed to be the largest producers in Europe.

In addition to the excellent *qualities* of the Snia-Viscosa Rayon in the raw, known the world over, we are able, through our large plants in this country, to offer the trade an up-to-date *service* in converted yarns of every description, both dyed and in the natural color.

Extensive experience and knowledge are undoubtedly of great advantage to consumers who secure their requirements through this old established and reliable firm.

NOTE:
In addition to Viscose Rayon, we are now prepared to submit samples and quote on 60 to 100 denier sizes of Nitro-Cellulose Rayon (made according to the most generally accepted alcohol process) the excellence of which, for special requirements, is well known to American manufacturers.

Commercial Fibre Co. *of America, Inc.*

General Offices: 15 East 26th St., New York City *Converting Mills:* Passaic, N. J.

REPRESENTATIVES:

Wm. G. Burke, Reading, Pa. Walter Schmaedig, Philadelphia, Pa. Geo. J. Loerzel, Chicago, Ill. Wm. Wulfers, Providence, R. I.
H. T. Cosby, Charlotte, N. C. and Chattanooga, Tenn.

Industrial Rayon Corp. Reaches New Capacity

Expansion Program at Cleveland Plant Now Completed—Brief Sketch of Manufacturing Operations Conducted There

By Douglas G. Woolf

THE problem of enlarging any textile plant is always beset with difficulties more complex almost than those involved in constructing a new mill. This is particularly true in the case of rayon manufacture which comprises a number of distinct and radically different operations, whose continuity must be preserved if efficient handling and a uniform product are to be secured.

Consequently the program of expansion which has just been completed at the plant of the Industrial Fibre Corp. of America in Cleveland, O., which plant is controlled by the Industrial Rayon Corp., represents an accomplishment which will be appreciated by all those close to the industry—particularly when it is known that the changes have been effected without the loss of a day's production.

Each year since 1920, when the Industrial Fibre Corp. of America was established the capacity of the Cleveland plant has been increased. In 1925, however, the most ambitious part of the program was accomplished. In that year, as has been stated previously in TEXTILE WORLD, American stockholders in the company acquired the Italian interests and formed the Industrial Rayon Corp. as a holding company for the stock. At the same time, increased production was planned, the goal for the Cleveland plant being placed at 3,500,000 lbs. per year. This goal has just been reached, the plant operating now on a basis of 12,000 lbs. per day. It is possible that by further improvements, a daily program of 13,000 to 14,000 lbs. may be accomplished but that represents about the limit which the company expects to reach at its present unit. Plans are in the process of development for the location of an additional plant in New England—and possibly another later in the South.

Technical Organization

When the writer visited Cleveland recently, he was particularly impressed with the technical organization effected by the Industrial. Control of operations is under the cooperative supervision of Charles E. Colgrove, plant manager and an engineer of wide experience, and Dr. M. G. Luft, chemical director and a prominently known rayon chemist. It is probably trite to say that successful operation of a rayon plant depends upon the proper balance between chemical theory and mechanical application. This has been secured at the Industrial plant through the organization headed by Mr. Colgrove and Dr. Luft.

The chemical supervisory features comprise a central laboratory and individual laboratories in each of the various departments. The central laboratory includes the routine testing section, where samples from the different plant laboratories are retested and checked against the plant reports; and a research section, where several chemists are engaged in fundamental work on cellulose chemistry and its relation to commercial rayon manufacture. The latter section is being reinforced by the establishment of an experimental spinning unit where test lots may be manufactured along new lines developed by the research staff.

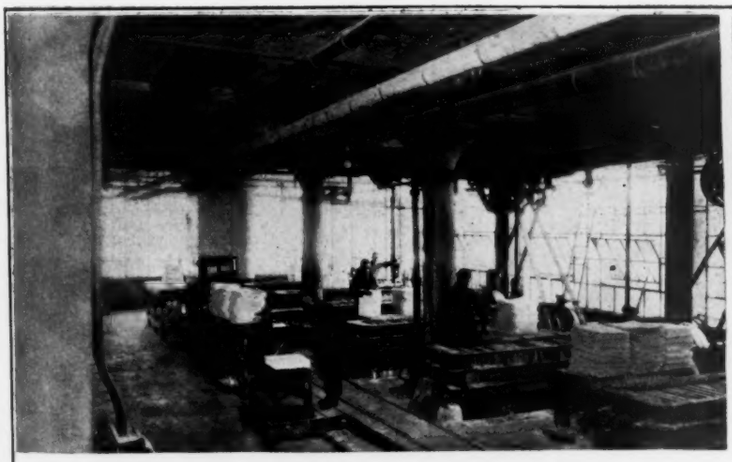
The departmental laboratories are fully equipped and manned with chemists whose job it is to test the product as it proceeds from one operation to another. This phase is of the utmost importance and its control by individual laboratory units insures prompt correction of any fault which may develop. Finally the re-checking of these results by the central chemical staff makes accuracy doubly assured.

Co-operating with this chemical organization is the engineering department, with its routine and research staff.

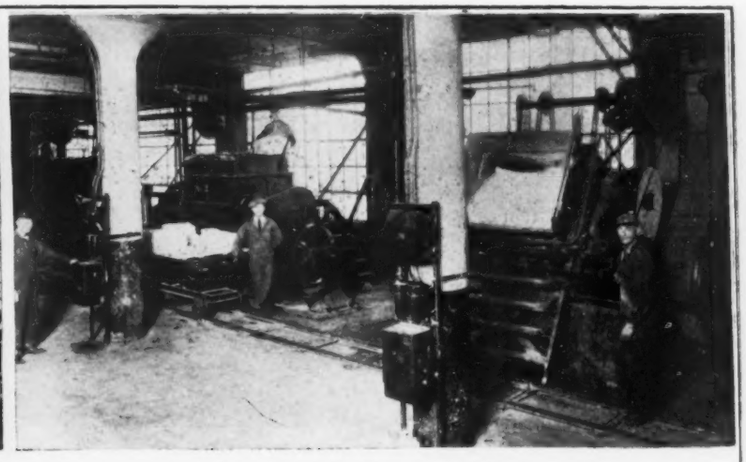
The Chemical Plant

It is impossible, within the space limitations of this article, to give anything but a sketchy outline of operations at the Industrial plant.

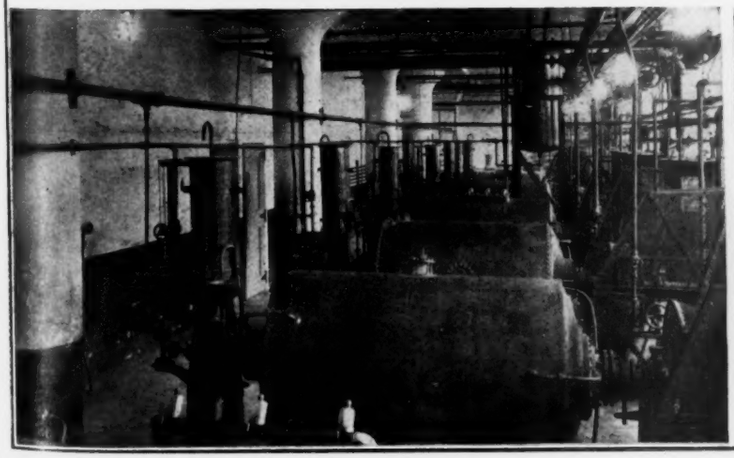
The top floor of the chemical plant, which supplies the viscose solution to the textile unit, is devoted to the



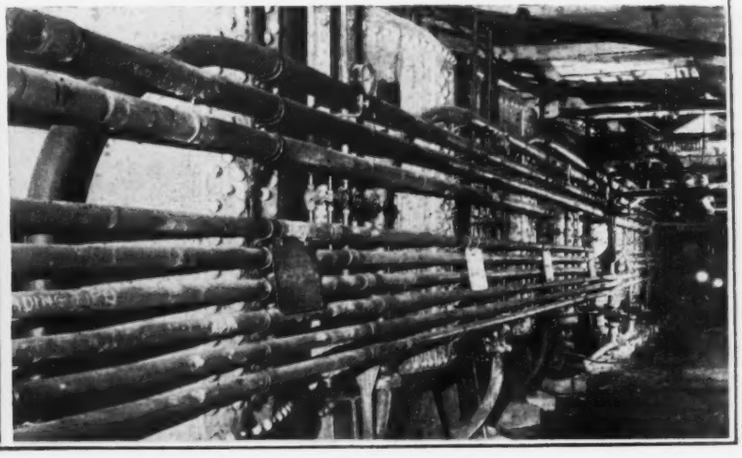
Mercerization of Wood-Pulp Sheets at Industrial Fibre Plant



Grinding of the Mercerized Cellulose



Xanthation of the Cellulose



Handling of the Viscose Solution

preparation of caustic soda solution. The latter is dropped by gravity to the second floor where the initial operation of "mercerizing" is conducted. The sheets of wood-pulp, approximately 17 x 18 in., are loaded into steeping presses built to the company's own specifications. These presses contain 50 sections and it is important that the same quantity be placed in each section. Incidentally the preliminary weighing of this charge is also vital in order that exact proportion of ingredients be secured.

The mercerizing is done with caustic soda at room temperature for one hour, at the end of which time the liquor is emptied from the steeping presses and hydraulic pressure applied. A press is loaded exactly every 30 minutes, in order to insure uninterrupted operation of the chemical plant.

The soda-cellulose resulting from the above operation is weighed to determine if it contains two parts of liquid to one of cellulose and is then passed to the crumbing machines, where it is slowly revolved and "chewed up" by two huge reversible toothed-blades. These machines are jacketed and the temperature carefully maintained during the operation.

The soda-cellulose crumb is then unloaded into small cans and passed to the ageing room, where it is kept under uniform conditions of temperature and humidity for a definite period of time.

At the end of this important phase, the product is passed to the xanthation department and loaded into jacketed tumblers for admixture with carbon bisulphide and conversion into cellulose xanthate, a soluble form of cellulose.

Finally this product is passed to the basement of the chemical plant, where it is dissolved in mixers in slightly alkaline water and then passed through several batteries of tanks and filter presses where the resulting viscose solution is purified and "aged" to the exact point where an optimum product may be secured on the spinning frames. During the dissolving of the xanthate, temperature is controlled within a range of one-half of one per cent.

Before leaving the chemical plant, it should be mentioned that the company has installed a recovery system where a large part of the chemicals used is recovered and purified for subsequent use—thus insuring even greater efficiency of production. Similarly a department, quite outside the present plant, is maintained for the preparation of the "spin-bath" used at the spinning machines.

The aged viscose solution goes from the chemical building to the spinning machines located in the textile unit. At present there are 19 of these machines, each equipped with 100 spinnerettes on each side. They have been built to the company's own specifications.

The Textile Unit

The plant is operated under the spool method, the solution passing through the spinnerettes into a fixing bath of sulphuric acid and niter cake and then over guides onto perforated spools. Washing takes place immediately after the spinning, by a process developed exclusively by the company.

After the spools of rayon have been dried and humidified in dryers, they are placed directly on Atwood 3 S twisters, where a twist of 2½ turns per inch is applied to the thread.

In order to bleach the rayon, it must next be converted into skein form. This is done on reelers, part of the Industrial reeling equipment having come originally from Italy, and part manufactured to specification in Cleveland.

After being laced, the skeins are passed to the bleach-house for washing and bleaching. This department includes three complete washing units. Incidentally a special conveying system has just been developed for moving the rayon from the reelers to the bleach house.

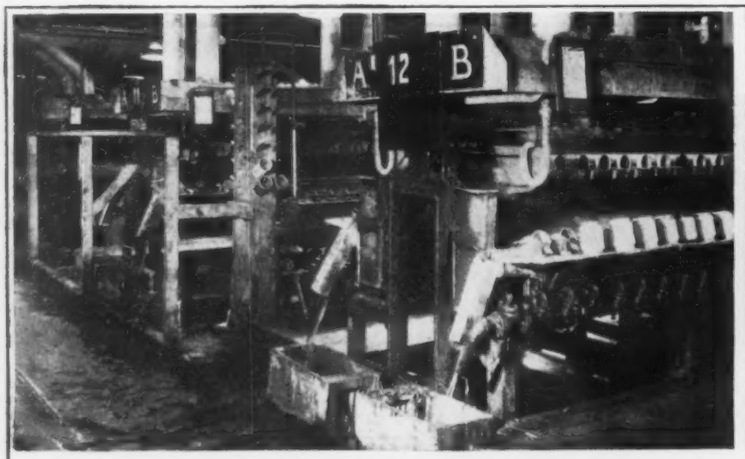
After washing and bleaching, the skeins are hydro-extracted, dried in Proctor & Schwarz dryers and passed to the conditioning and inspecting room where both these operations are combined in one. This room is a particularly attractive and well-adapted one. It is unnecessary to emphasize here the importance attached to this inspection phase. The Industrial Rayon Corp. is well aware of its significance and has devoted much of its executive supervision to the perfection of the personnel in the inspection department so that the rayon, as finally passed, shall accurately reflect its grade markings.

Product Manufactured

The company has specialized on 150 and 300 denier rayon but also makes a small quantity of 450 denier. The 150 denier contains 20 filaments to the strand while the 300 and 450 contain 44 filaments.

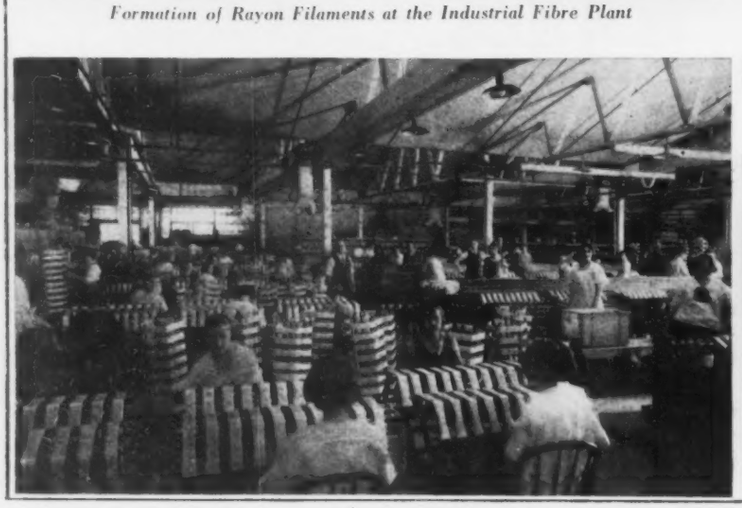
Air conditioning equipment is provided throughout the plant.

Having completed the physical expansion of its Cleveland plant, the company's technical staff there is now busily engaged in research and development work looking toward further improvement in its process and its product.

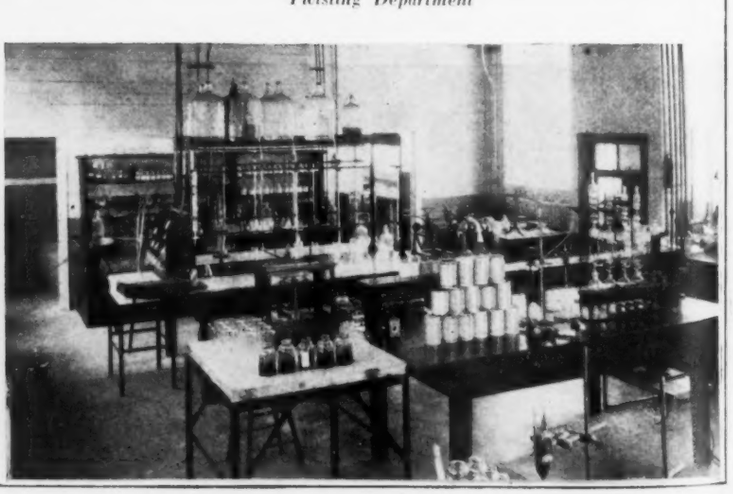


Formation of Rayon Filaments at the Industrial Fibre Plant

Twisting Department



Reeling and Lacing



Works Control Laboratory

New Rayon Expansion for Acme

Completion of Entire Program Now Contemplated Will Increase Output to 10,000 Pounds Daily

THE news that the Acme Artificial Silk Co., of Cleveland, Ohio, has changed its name to the Acme Rayon Corp. and is planning a program of considerable expansion, has proved of real interest to the rayon manufacturing and consuming industries because this company's personnel has been identified with artificial silk manufacture over a long period of years. Prior to the organization of the company in 1920, C. P. Green, its treasurer and founder, had been president of the Cleveland Art Silk Co. during its 12 years of existence.

The new program calls for immediate increase of its plant output, now on a basis of 1,200 lbs. daily of 300 denier, to 3,500 lbs. daily, comprising 2,000 lbs. of 300s and 1,500 lbs. of 150s. Eventually the entire output of that unit will be devoted to 300 deniers, making a total of 5,000 lbs. daily, and a new unit will be built to produce from 5,000 to 6,000 lbs. of 150s. In other words, the daily capacity of the plant will be increased to over 10,000 lbs.

Construction Plans

The first step in the program will be the erection of a one-story and basement addition at the rear of the plant, to be 32 x 110 ft., of brick, steel and concrete construction, to house the chemical plant which will eventually serve both units. This will give space for additional spinning equipment in the present plan. This building is now under construction.

Still another building will be erected at one end of the plant, to be approximately 80 x 150 ft. and to be devoted to finishing and packing.

Finally, another complete unit, to be housed in a building approximately 1,200 ft. long, will be constructed on adjacent property. It is this unit which will be devoted exclusively to 150 denier rayon.

To finance this expansion, the capitalization of the company will be increased at first from $500,000 to $1,500,000 and later on to $5,000,000.

The initial step is included in the proposed incorporation of the Acme Rayon Corp., with an authorized capital of $1,500,000 7% cumulative first preferred and 30,000 shares of no par common—this company to acquire the entire property and assets of The Acme Artificial Silk Co.

Naturally the entire program cannot be effected immediately, and it is the policy of the company to progress carefully so that each unit of enlargement may be placed in effective operation as it is finished.

The company reached financially successful production about two years ago and, since then, has been realizing decidedly favorable returns on its investment. It operates under the viscose process, by the pot or cake method of spinning.

Linens Disappointing to the Industry During 1925

Exports from Great Britain Total 83,680,700 Square Yards, Compared With 110,763,000 Square Yards for 1924—Purchases by the Continent Unusually Small, With Competition by Belgium, France and Czecho-Slovakia—Advertising Campaign in United States to Develop Damask Trade

BELFAST, IRE.

By Textile World Belfast Correspondent

REGRETFULLY it must be admitted that the year 1925 has been disappointing for those connected with the British linen industry. The industrial situation at the end of 1924 was brighter than for a long time, and there were distinct anticipations of a definite trade revival in 1925. It has been a year, however, of arrested development, and all concerns have found it exceedingly difficult to secure contracts at remunerative rates.

Optimism at Start

January opened with optimism, and hope of better times was more than borne out by the exports during the immediately succeeding month reaching a record unapproached by any corresponding month since 1920. During the following months shipments of linens gradually declined, until for August the absolutely low water mark was reached with 5,143,700 sq. yds. of linen piece goods—probably the minimum month's bulk for a generation. There has been a gradual improvement since, but at its best merely nominal, exports during November amounting to little more than half that exported during February.

Hence when we compare the total exports of linen piece goods for 1925, totalling 83,680,700 sq. yds. with the 110,763,000 sq. yds. of the previous year, the only conclusion we can arrive at, is that, while 1924 was merely a moderate period of activity, 1925 was wretched.

Export Statistics for Four Years

The following data show the exports of linen manufactures in recent years:

	1922 (000 omitted)	1923 (000 omitted)	1924 (000 omitted)	1925 (000 omitted
Linen piece goods, sq. yds	77,534	89,692	110,794	83,680
Handkerchiefs, not in the piece, doz.	7,070	7,043	8,445	3,128
Handkerchiefs, not in the piece, value	£763	£852	£1,172	£901
Damask table linen, not in piece, value	£1,789	£1,619	£1,466	£1,157
Finished thread, (cwts.)	19,745	23,669	23,712	24,422
Finished thread, value	.....	£912,187	£887,981	£864,031
Unenumerated linens, value	£1,129	£1,308	£1,361	£1,289
Total linen manufactures exported, value	£11,578	£11,735	£12,444	£11,207
Average price piece linen, per sq. yd.	21d.	18d.	18d.	20d

Since about 25% of the total linen made is absorbed by the United Kingdom, this percentage added to the above figures of total exports will roughly give the total production.

Comparative Exports

Unlike cotton, which generally finds its markets in the East, linen is mostly exported to western countries. The largest customer of all normally is the United States, which takes around 50% of total exports. However, during last year this ratio vacillated very peculiarly, being as high as 64.64% for January and as low as 25.78% during June. In fact, for the year the total linen piece goods taken by United States reached only 40,225,200 sq. yds. (compared with 67,306,600 sq. yds. for 1924 and 52,016,100 sq. yds. in 1923). The outlook is for gradual improvement.

Next in importance as linen buyers were the British overseas dominions, taking 21,807,900 sq. yds. This total was an improvement of 646,100 sq. yds. over 1924, and represented 27.93% of total exports, compared with only 20% in 1924. Today Australia takes probably five times as much linen per head as the United States does, while Canada takes double. Latin America's quota for 1925 was 9,412,700 sq. yds. or an improvement of nearly 33% over 1924.

Probably the most disappointing feature of the year was the miserable purchasing by Continental countries, Europe combined absorbing for the year only 2,660,400 sq. yds. or less than half that taken by United States in its worst month. It must be remembered that owing to their depreciated exchanges and lower working costs Belgium, France and Czecho-Slovakia were able not alone to undersell us in our overseas markets but also to dump their linens into the United Kingdom itself. The fact that during the past year £1,411,266 worth of these linens was imported into our home markets, compared with £1,042,802 worth during 1924, and £692,001 worth during 1923 proves how imperative it is that the British linen industry should desire the protection of the Safeguarding of Industries Act.

Other countries took 8.62% of total British linen exports, and here the most salient feature is the steady progress of the Japanese as linen producers.

Price the Factor in Year's Trade

The reason for the arrested development of the British linen industry may be expressed in one word—price. With raw material around £164 per ton, compared with about £50 in 1914, with cotton quotations declining—manufacturers were confronted by an insurmountable obstacle, for supplies were veritably a Continental monopoly. Happily home flax is today around £100 so it may be that this reduction, with others may be reflected in cheaper linens. It is true that during the year efforts have been begun for the growing of cheaper and more productive British flax—the Government aiding the trade in this enterprise substantially—but sufficiently material results cannot materialize for some years. Meanwhile last year almost 30,000 tons of European flax were imported at an average cost of £131 per ton, compared with only £96 per ton in 1923 and £118 in 1924. Further, with lack of stabilization of prices linen was purchased in only small lots last year, thus making overhead costs higher. Then also cotton quotations are approaching normal again, so this factor must have a stimulating effect on linens.

Damasks during the past few years have been exceedingly languid. A comprehensive advertising scheme portraying the virtues of these fabrics in the United States is under way. Its cost will be £200,000 contributed by the Ulster damask trade, with £4,000 per year from the Scotch branch and up to £10,000 per year from the Northern Ireland government. This scheme will be directed by a committee of the home damask firms in New York. Much of the 1924-25 trade was in linens for ladies' costumes and though this vogue has now waned greatly other developments may help to replace it. Thread making has been perhaps, the brightest feature in the linen industry during the past year.

Prophets Optimistic

As for the outlook, while there are no very material proofs of brightening at the moment—(37.3% of the trade being unemployed)—yet there is no pessimism and those concerned instead of lamenting go on developing new weaves and designs. Last year it was found possible to incorporate celanese with flax in some of the heavier fabrics, giving great beauty in dress cloths.

AMERICAN BEMBERG CORPORATION

"EAGLE BRAND"
SYNTHETIC SILK YARN

UNITED GLANZSTOFF CORPORATION

RAYON

WOLF, STRAUSS & CO., INC.

65 MADISON AVENUE, NEW YORK

Sole Distributors

Excellent First Half Year Seen in Hosiery

Conservative Policy Should Be Followed on Last Six Months of 1926—Record Expansion of Full-Fashioned Hosiery—How Long Will Fancy Half Hose Be Good?—Light Colors Sure to Continue Popular—Few New Fashion Trends

WITH a year of better than fair average results behind it the hosiery manufacturing industry enters 1926 with confidence. The situation has been and is spotty; there are soft spots here and there; all manufacturers do not make money even in a year of general good business. From the sidelines, however, it is possible to forecast a healthy demand through the new year for most classes of merchandise which were popular last year.

Particularly is this true of the first six months of 1926. In important essentials the broad outline of business developments during the first half year is already well drawn. Underlying all basic commodity markets is a general business prosperity in the United States which has perhaps never before been equalled in the history of the country. Nothing which now appears on the horizon can disturb a satisfactory volume of trade during the first half of 1926.

Economists and those who do not claim to be anything but plain business men are preaching caution for the last half of the year. This doctrine, no matter under what high sounding names it is advanced, is nothing more than ordinary common sense. A conservative outlook on the last six months of the year does not imply fear of a depression, but rather a natural disinclination to look too far ahead in these days of close trade buying, uncertain raw material values and a fairly fickle public.

1925 Features; 1926 Problems

The outstanding features of 1925 in hosiery were: An enormous increase in demand for full fashioned silk goods for women, which has been accompanied by a rapidly increasing production; heavy inroads made in staple half hose by novelties in men's goods, notwithstanding predictions that fancies would never amount to much; relative price stability in finished goods which contributed heavily to the success of the year; expansion of seven-eighths goods to a position which makes their future as a staple secure; continuance of the vogue for light colors and sheer or semi-sheer weights in women's silk hosiery.

The record of 1926 will largely be written around these same features outlined above. There are apparently no new fashion elements of moment which will be introduced into the business this year. The important questions to be decided are those pertaining to the merchandise mentioned.

How much farther can full fashioned production be expanded until supply catches up with demand, as it inevitably must? Will the novelty vogue in half hose peter out this year, or go on into 1927? These are the leading questions to be solved during 1926.

Classified Production Figures

An interesting record of 1925 is presented in the production figures printed below. These are statistics of the Department of Commerce, compiled from reports received from a number of establishments which averages about 325, representing figures from about 405 mills. The mills reporting produced about 65% of the total value of hosiery reported at the census of manufactures, 1923.

HOSIERY PRODUCTION FOR 10 MONTHS OF 1925
(In Dozen Pairs)

	Total	Men's		Women's		Boys' and misses'	Childrens' and infants'	Athletic and sport
		Full fashioned	Seamless	Full fashioned	Seamless			
Jan. 325 (404)...	4,522,870	61,938	1,681,000	686,238	1,101,774	530,789	424,230	36,901
Feb. 326 (400)...	4,509,061	54,586	1,630,925	692,367	1,128,594	517,435	447,077	38,077
Mar. 327 (407)...	5,008,402	59,112	1,760,552	742,044	1,379,626	545,798	467,110	54,160
April 331 (409)...	4,932,048	54,299	1,744,070	774,208	1,297,006	523,305	473,092	66,068
May 320 (403)...	4,926,082	53,452	1,683,808	776,102	1,373,110	512,818	450,984	75,808
June 318 (401)...	4,719,671	58,103	1,586,073	810,763	1,306,376	495,634	394,875	67,847
July 321 (405)...	4,564,163	55,806	1,500,757	819,111	1,253,413	484,115	386,926	64,035
Aug. 324 (406)...	4,557,973	43,781	1,588,263	828,102	1,144,256	497,611	390,005	65,955
Sept. 331 (415)...	4,484,147	52,223	1,403,591	834,617	1,227,008	476,110	427,013	63,585
Oct. 330 (420)...	5,239,777	55,501	1,870,116	950,370	1,286,250	592,150	411,715	73,675

(The figures in parentheses after the months indicate the number of mills reporting. Comparison with production during 1924 is made difficult by the fact that a much larger number of mills reported to the Department of Commerce in 1925 than in 1924.)

Full-Fashioned Boom

Consideration of the hosiery year 1925 from any angle must give the place of first importance to full fashioned goods. Early in the year an increasing popular demand for these goods got under way, gathered impetus and during the latter half of the year assumed the proportions of a real boom.

No one who has followed the business even superficially need be reminded of the hectic preparations that were made to meet this demand. Established manufacturers added to their machinery as quickly as possible; mills which never before had tackled full fashioned goods were attracted to the field. The expansion program is still in full swing.

Full time operations have been the lot of practically all full fashioned manufacturers for the last year. At times during 1925 premiums were freely paid for merchandise for quick delivery, and not much of it could be uncovered by the offer of premiums. An increase in price averaging 50-75c a dozen for spring, 1926, deliveries was accepted complacently by the jobbing trade, which quickly contracted for the entire six months' production of well established mills.

Even the most confirmed full fashioned optimist realizes that the present rate of expansion of production cannot go on indefinitely. It is freely predicted by many of those in close touch with the business that some time this year, probably by the middle of summer, a point will be reached where the increased production will exceed the growing demand.

A set back is certainly in the cards, but it may be conservatively stated that any depression which comes to full fashioned silk hosiery as a class will be merely temporary, in the absence of a severe depression in general business. Consistent growth in the demand for full fashioned goods is hardly escapable. The consumer has become more and more educated to their merits. Their increased use is but another example of the trend toward better quality in all classes of merchandise. It cannot be permanently halted as long as women have the money to pay the price—and, as Europe is constantly telling us, we have "all the money in the world."

Enter the South

Perhaps the most interesting part of the full fashioned development has been the rapid expansion of manufacture in the South. Mills which until recently never made anything but seamless goods are today turning out excellent quality full fashioned stockings. A number of well established seamless mills will get into production on full fashioned some time this year.

A rapid expansion in the manufacture of full fashioned hosiery below the Mason and Dixon line during the next ten years is certain to be one of the major developments of the industry during the next ten years.

Chiffons and Medium Weights

Women have turned in constantly increasing numbers to light-weight hosiery. Full fashioned chiffons in 1925 had their largest year, and they are unquestionably headed for still greater heights in 1926. Accompanying the chiffon vogue has been a material expansion in the use of so-called medium weight stockings, 8 and 9 strand full fashioned. These medium weights have cut into the regular service weights to a considerable extent, and the immediate future holds every promise of a continuance of this important trend.

Seamless chiffons as a class have not done as well so far as was expected of them by some market students, although there are individual exceptions to this general statement. Certain lines of spring needle chiffons have made a real success, and they are in for increasing popularity, it is held.

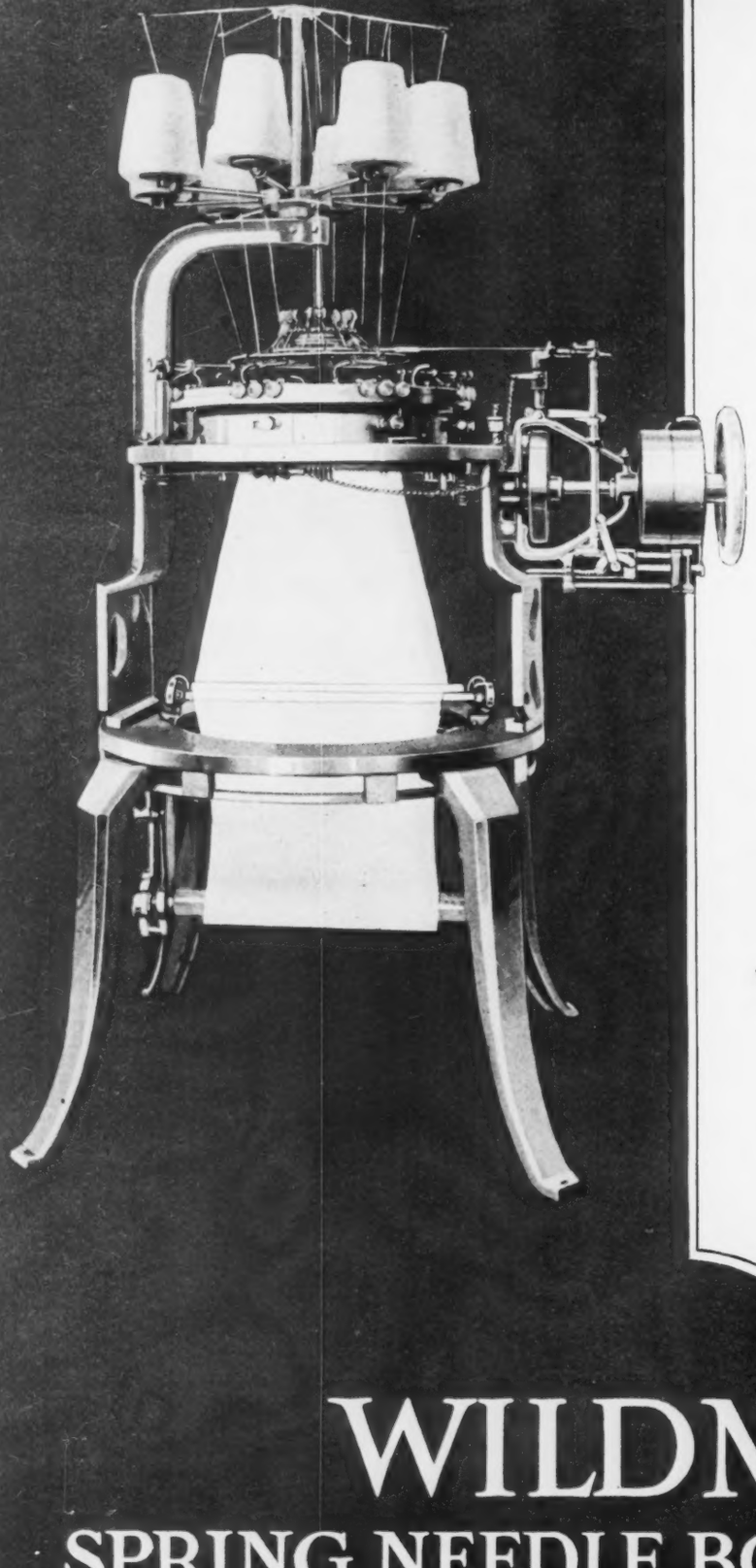
Prejudiced and unprejudiced individuals are of the opinion that a strong swing toward spring needle merchandise is in the cards as one of the important movements of the next few years. The beginnings of such a movement are already visible, they claim. The point has hardly been reached, however, where it is possible to make definite statements one way

The Hosiery Background—

A good year, on the whole, in 1925.
Unparalleled expansion in full fashioned goods.
Large market for novelty half hose.
Relative price stability in finished merchandise.
A steady swing toward better quality goods.
Dominance of light colors in women's hosiery.
Fancy-top seven-eighths goods established as staples.

The Probable Future—

Good business for first half, at least, of 1926.
Continued close buying due to raw material price uncertainties.
Temporary excess production of full fashioned goods.
Gradual trend away from men's novelties.
Increased importance of light colors in women's hosiery.
Further restriction of market for cotton hosiery.
Growing demand for chiffons and medium weights.



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SPRING NEEDLE BODY MACHINE

or the other on this subject. With this careful evasion we ask to be excused from commiting ourselves.

Novelty Half Hose

No style trend of recent years has aroused so much controversy as the popularity of novelty half hose. Making their appearance on the market as a volume proposition during the summer of 1924, stripes and checks for men have built up a large market for themselves, notwithstanding the opposition of many conservatives, consumers as well as manufacturers.

1925 witnessed probably the largest vogue for novelty half hose designs ever seen in this country. Both for spring and for fall they dominated the men's business, although it is to be doubted that the production of fancies was at any time more than 50 per cent of the total production of half hose in the United States.

All kinds of opinions are held as to their future. There are those who believe that they have already passed their peak, and are definitely on the down grade. Opposed to this viewpoint is that of a considerable number of capable men to the effect that fancies will be good all this year, both for the spring and the fall seasons; these men hold that novelties will receive fully as large a reception from consumers this year as they did last year, and that their reign will extend into 1927, at least.

To the impartial observer it appears as if there can be no question about the popularity of fancies this spring, but that, at this writing, the fall is a horse of a different color. No one can predict just when the big vogue will come to an end, but one thing is certain, and that is that men's novelty half hose, after all the present tumult has died away, will enjoy a larger regular market in this country than was the case before the appearance of their latest big vogue.

Women's Seamless Goods

In the seamless field, women's goods promise to follow closely the lines of development which have been theirs during most of 1925. These may be summarized as: Decreasing production of all-cotton goods, whether mercerized, combed or low-end carded; increasing production of all-rayon and silk and rayon mixtures, especially the latter; probably further restriction of the market for all-silk goods.

Novelties do not seem to have much of a place in the women's market of the immediate future, although this statement may be qualified to some extent. The tuck stitches which were offered so freely last year seem definitely to have had their day, so far as women's goods are concerned. The future of R I merchandise for women is still an open question, majority opinion in the selling market leaning to the conclusion that they will not cut as large a figure this year as last.

Nothing is now in sight to take the place of this type of merchandise this spring, and the conclusion is inevitable that the business in women's seamless goods will be featured by further marked expansion in silk and rayon mixtures, both plaited and twisted numbers, and in all-rayon goods. High colors of one shade or another will be good for as far ahead as the eye can reach.

Fine Gauge Trend

The tendency toward finer gauge merchandise is too old a story to need much space here. The introduction this year of a 300 needle machine for the production of latch needle chiffons marks the farthest point reached to date in the development of fine gauges in seamless goods, and in the opinion of some it represents the limit of possibilities until decided improvement in knitting needles takes place.

While on this subject, it is significant that the production of 42 gauge full fashioned goods is expanding rapidly, and that capable manufacturers who are newcomers to the full fashioned field have installed and are installing 42 gauge machines in preference to those of 39 gauge.

Exports and Imports

Export and import figures for the full year of 1925 are not available as this is written, but a summary of statistics for the first ten months of the year, in comparison with a similar period in 1924, is printed below. The figures are those of the Department of Commerce.

It will be noted that substantial increases are shown in exports of cotton, silk and rayon hosiery, and that while there were larger imports of cotton and of wool hosiery in 1925 than in 1924, the increase was comparatively insignificant.

Exports for Ten Months Ended October—

	1924		1925	
	Dozen Pairs	Value	Dozen Pairs	Value
Cotton hosiery	4,034,378	$7,586,244	4,582,634	$8,657,826
Silk hosiery	634,306	5,910,081	1,029,745	8,888,120
Rayon hosiery	705,590	3,145,464	1,342,998	5,353,761
Total	5,374,274	$16,641,789	6,955,377	$22,899,707

Imports for Ten Months Ended October—

	1924		1925	
	Dozen Pairs	Value	Dozen Pairs	Value
Cotton hosiery	416,611	$1,137,080	471,041	$1,666,079
Wool hosiery	406,109	2,407,069	450,391	3,138,513
Total	822,720	$3,544,149	921,432	$4,804,592
Excess of exports over imports	4,551,554	$13,097,640	6,033,945	$18,095,115

The position of rayon in the hosiery field may be said to have been consolidated last year rather than greatly increased. Its use has been gradually but constantly widening, and further consistent growth is confidently expected. Particularly is this true in mixtures, in women's, men's and children's hosiery. The all-rayon stocking received something of a set-back from the action of Great Britain and the Argentine in imposing import duties on rayon manufacturers, but this restriction of export outlets has not had any serious influence on domestic manufacturers of good quality all-rayon stockings. They had a good year in 1925

Women's cotton hosiery naturally has not flourished, because of the trend toward higher priced merchandise, and there can be no question that its volume is in for further shrinkage. Competition has been severe on all classes of cotton goods, and this competition will certainly not disappear overnight. Aggressive mills have built up a substantial export business on cotton hosiery for women, setting an example which might well be followed by more in the industry.

Children's Goods

Children's goods have clearly shown the effects of the novelty influence, and those manufacturers who have kept abreast of market requirements have capitalized this feature. In this branch of the business the tuck stitches introduced in large numbers seem to have a place all their own and a fairly secure future. In children's goods, too, R I's seem to have a better future than is theirs in the women's field.

Seven-eighths goods with fancy tops have come to dominate the children's business so decidedly that there is no mistaking their importance, present and future. Boys' golf hose were one of the big successes of 1925, and this success should be repeated during the present year. It is the design of the tops which primarily determines the sale of all merchandise of this class, and there is no reason to look for a narrower market as long as mills offer bright and attractive designs in fancy tops.

Infants' socks, on the whole, enjoyed a good year in 1925. There is some pessimistic talk to the effect that they are being over-produced, that there are too many mills in the infants' sock business, but good manufacturers have experienced no difficulty in booking substantial advance business for this spring.

As has been true for some time, this business too is dominated largely by style. The character of styling put into infants' socks has improved steadily, and each recent year has witnessed further advances in the production of quality merchandise. The fact that rayon has played an outstanding part in this development is too well known to need expansion here.

Wool Goods

Wool goods as a class had a sort of in-and-out year in 1925. Novelties dominated the men's business, and rayon and wool mixtures were perhaps the outstanding feature in the women's end of the business. Erratic weather during most of last fall and the early winter interfered to some extent with the distribution of wool goods at retail, and has held up the placing of advance business for this year.

Selling agents who know their business say that 1926 will witness a better business in staple wool half hose, fancy patterns not dominating to the extent which was true in 1925, and that the popularity of wool and rayon mixtures, especially those to retail for $1 and $1.50, will continue through the current year.

In some sections it is believed that something of a revival of novelties in women's wool goods will take place next fall, but this is a long-range prediction which has no particular substantiation at this writing.

Men's Staples

Little that is new may be said of men's staples. The large popularity of novelties, in which silk, rayon and wool plays a large part, has put staple cotton goods into a position of distinctly secondary importance. Low-end carded goods, as has frequently been predicted in these columns, have become more and more a specialty proposition in the sense that their manufacture is being confined more and more to large mills comparatively few in numbers. This tendency gives every indication of continuing.

Competition on mercerized and combed socks has been severe, just as it has on boys' three pound ribs and misses' 300 needle combed goods. Prices have not been satisfactory. The large cotton crop of last year and the consequent drop in raw material prices coupled with the fact that yarn prices at the end of 1925 had not been reduced in proportion with the reduction in cotton, have created a price problem for mills which is still to be solved as this is written.

Staple goods in half hose will always be the bread and butter of the business. There will always be a market for good quality mercerized and combed numbers. Beyond these general statements it is impossible to go at this time.

Men's all-silk numbers have enjoyed a good business on the whole, and the market for them should be an expanding one. Rapid increase in the number of split sole machines in operation caused some price uncertainty during 1925, and the offering of some lines at very cheap prices, but there can be no question that demand for this type of merchandise will expand consistently.

Production figures do not show a growing market for full fashioned half hose, but rather the reverse.

Golf Hose

A substantial market for golf hose

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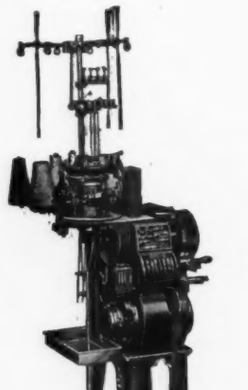

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for men (boys' goods have been previously referred to) has been built up in this country, and it should be a growing one. It remains true that the bulk of the demands of this market for quality goods has been taken care of by importations, principally from England and Scotland. The domestic manufacturer has evidently convinced himself that he cannot compete in the quality wool field.

On cheaper numbers, both wool mixtures and all-cotton goods, domestic mills have done an excellent business, which should show substantial growth during the next few years.

Colors

The old problem of colors has been somewhat simplified merely by the fact that manufacturers have become accustomed to the color vogue in women's goods and have rigged their business accordingly. It is a foregone conclusion that light colors will be the big sellers for as far ahead as it is comfortable to predict. Talk of a return to fashion of blacks has come to nothing.

A Few Freaks

No record of 1925 would be complete without at least short reference to the freaks of the year. These include "bobbed hose"—knee length stockings with fancy tops for women, which were going to revolutionize the business but which have not done so, because of the ladies' desire to roll their own; flappers' hose, short lengths worn flapping around the ankles, which were a complete flop; and boys' half hose, made in small sizes, frequently in fancy patterns, for wear by young boys with long trousers. The long trouser vogue appears to be only a passing fad, however, which will leave no serious imprint upon the hosiery business.

Mention must also be made of the fad of the silly young female for wearing no stockings at all during the warm weather. This fad gained some ground during 1925 and will probably be with us again this summer, but it is hardly worth more than passing notice, unless all the women of the country are to become frivolous "movie" stars.

This, then, is the record of the essentials in the hosiery business past, present and future, as we see it. In a short review of this kind it is possible to touch only the high spots, leaving the details to be filled in by the reader's imagination.

As a parting shot it may be stated that the style tendencies which appear to be taking shape at this time are: A leaning toward a considerable vogue for laces and embroidery effects in women's silk goods; a probable healthy revival of clocks in half hose; and the beginnings of a trend toward slate colors, instead of nudes, in women's silks. All of these are in the first stages of development—they may amount to much or to little.

Appreciable Improvement in Underwear

Better Adjustment of Output to Demand in Several Branches of the Business—1926 Shapes Up as Fair-to-Good Year—Further Expansion in Rayon Goods Is Certain—The Bal Crisis—Increasing Importance of Southern Production

WITH a good production year behind it, in the major branches, the knitted underwear industry faces 1926 with a greater degree of confidence than was in evidence a year ago. A number of circumstances combined to make 1925 a year of practically full time schedules for most manufacturers of heavy-weights; better adjustment of output to demand in other branches has been attained; a broader market in women's rayon goods has been built up.

Any statement that may be made regarding the profitableness of 1925 could probably be successfully challenged in individual cases, but it is a fair and moderate declaration to make that, viewed as a whole, the industry made money last year, whereas in 1924 the reverse was probably true. The broad outlines of 1926, as they can now be seen allow the prediction that the new year will also be a profitable one.

There are no distinctly new features on the underwear horizon. No outstanding new developments in manufacturing or merchandising have taken place. The industry is gradually accommodating itself to changing market demands; progress in many lines is slow, but seemingly sure. The benefits of cooperative work are slowly making themselves felt. Increasing attention is being paid to style factors by an increasing number of manufacturers, which is probably all that can be asked for in an industry which must remain essentially conservative.

Rayon

From the standpoint of volume production women's rayon underwear should certainly not receive first consideration in a review of this kind, but it deserves premier position by reason of the great strides it has made, and the widespread interest in its future. The number of old-established mills which got into this business for the first time during 1925 is large. It includes some of the most conservative manufacturers, who never before turned out anything but staple cotton garments.

So far this business of rayon underwear for women has been handled something like a bonanza proposition. It is still a field which is comparatively new, and it has been expanding rapidly. Attracted by a good thing there has been a rush of mills, and concerns which do not manufacture a yard of fabric themselves, to get aboard the bandwagon.

Evils which always accompany a new development have not been entirely absent from the rayon underwear field, both in the manufacturing and in the merchandising end. But as time goes on reputable manufacturers are acquiring more knowledge of their subject, are recognizing the limitations of their product, and are concentrating their production on the qualities which give real service.

It is these last named facts which hold out the best promise for the future development of rayon undergarments for women.

Sad experience has taught that sleazy goods, carelessly made on any old machine, of any old denier fibre, and sold in any old way, are nothing for the manufacturer who wants to stay in the business to trifle with. Those who have studied carefully the market possibilities of all-rayon underwear for women acknowledge that there are types of garments which at the present stage of development of the fibre itself are not serviceable, which will not stand up under ordinary usage.

To admit this fact is not to damn rayon underwear as a class. To admit it, and then to go ahead, is the procedure recommended by those who have a large stake in the future of women's rayon undergarments.

Rayon Stripes

Before leaving the subject of rayon mention should be made of the interesting experiments being made with rayon-striped goods in the men's underwear field. A considerable measure of success has attended the efforts of important producers of men's heavy-weight ribbed goods to push merchandise of this class with horizontal rayon stripes. Starting with the cautious reception which is always given anything new by the jobber, these goods have built up a fair market for themselves. Last fall there was a time when mills could not give the quick deliveries, on duplicate business, which were wanted by buyers. This field holds every promise of healthy future development.

Lightweight flat knitted garments containing horizontal rayon stripes were offered last summer for the first time in a quantity way. A number of balbriggan mills which were suffering from a contraction of their market offered rather extensive sample lines, the rayon stripes in instances being colored.

These offerings have not met with a particularly enthusiastic reception. But mills which turned out merchandise of this character previous to last year, who may be considered as pioneers in the business, found that their real business came in the form of duplicate orders, not initial ones. It is not improbable that rayon stripes have a real place in the lightweight field. A substantial business has been done in this character of merchandise for this year in nainsooks. In the knitted field it is probable that the development will be slow, and spread over a period of years.

The South

The question of North vs. South as a manufacturing location is one which is loaded with dynamite. Any flat statement subjects its maker to violent attack. Time alone can answer the question of whether the center of production will remain above the Mason and Dixon line or move below it.

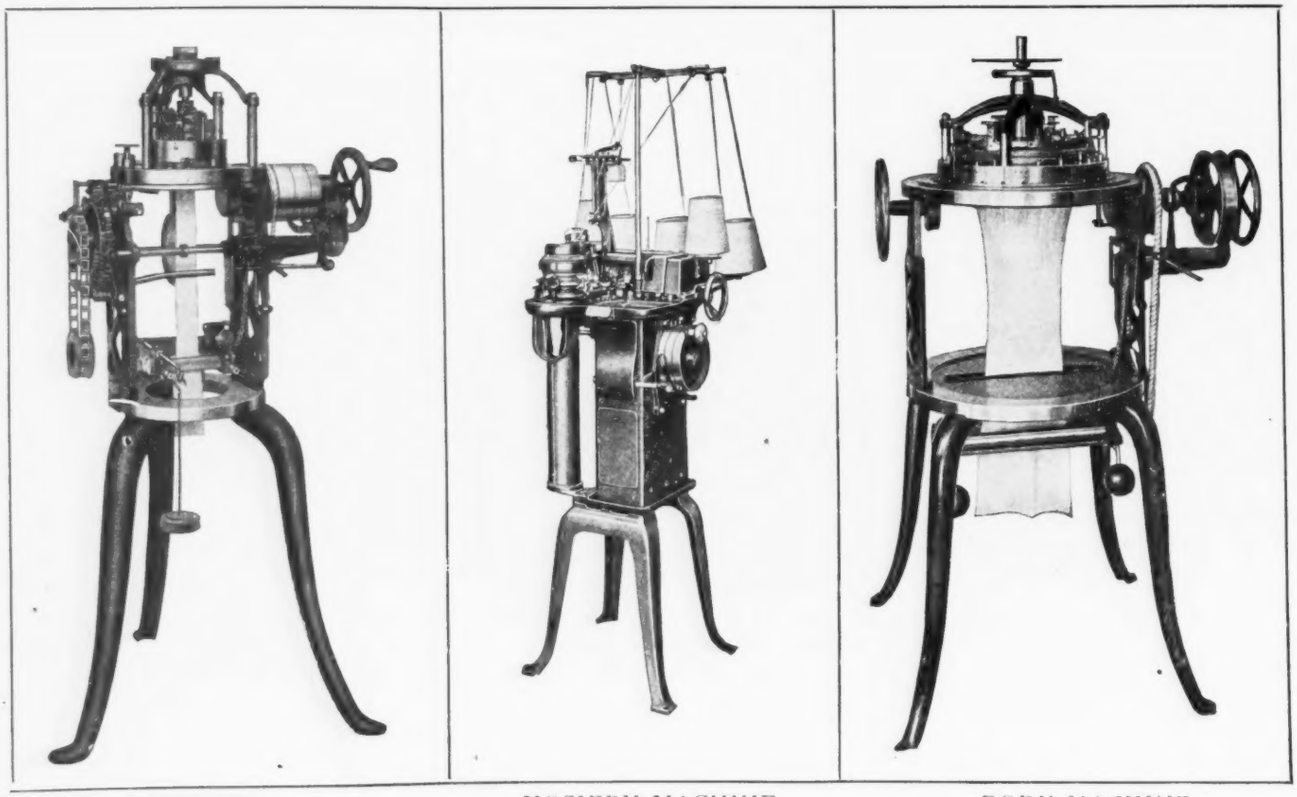
In the men's heavy-weight ribbed goods field, however, there can be no question about the increasing importance of southern production. The southern mills may not dominate the business, as has been stated frequentenough, but they certainly are exercis-

Water Over the Dam—

An excellent production year in 1925.
Material expansion in women's rayon underwear production.
Increasing importance of southern production of men's heavy-weights.
Slump in balbriggans.
Growing market for nainsooks.
Improvement in women's cotton goods.

On the Horizon—

Good prospects for 1926 generally.
Further growth of southern production.
Steady swing toward lighter weights.
No sign of let-up in nainsook popularity.
Continued expansion in employment of rayon.
Further limiting of market for shirts and drawers.



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ing an influence which is growing every year.

No longer is it possible to dismiss the subject of southern production with mere mention of the word "quality." The quality of men's heavy-weight ribs made in the South has been constantly improved; the quality of New York State production has, in certain cases, at any rate, not been maintained at old standards. Last fall for the first time there was offered by a large Tennessee manufacturer a complete line of men's spring needle ribbed goods, the first spring needle heavy-weight underwear production in the South. To those of the student frame of mind this offering has great significance.

Heavy-Weight Ribs

The better than satisfactory year enjoyed in 1925 by many lines of cotton heavy-weight ribbed goods was the result of a number of circumstances, but it can hardly be questioned that the chief reason for it was the fact that the jobbing trade as a whole did not buy its full requirements during 1924. The mills of the country last year, particularly last fall, were called upon to turn out considerably in excess of their normal capacity.

The natural result was the selling up of well-known lines, and the shortage of desirable merchandise which obtained during a large part of last fall and early winter. This shortage persisted notwithstanding the unfavorable weather in the late fall.

Then, too, prices were satisfactory all around. Mills' figures allowed of retail prices which insured maximum distribution. There could be no consumer complaint against prices on standard underwear. Reductions which have been made on 1926 merchandise make this condition even more true for the present year.

To date a healthy business has been booked by a number of mills for early deliveries of cotton heavy-weights for this year, and while orders for later deliveries may be slow in coming in, the outlook is for an excellent volume none-the-less. Stocks in distributing channels are light. The jobber who was worthy of his salt watched his stock carefully, and, knowing that reductions would be in order on 1926 goods, did not carry over one dozen of 1925 heavy-weights more than he could help.

The trend toward lighter weights has been apparent for years, and this trend will undoubtedly be carried still further. At this writing it is probable that the men's 14-lb. ribbed union suit has supplanted the 16-lb. weight as the basic number.

Another old friend, the tendency toward union suits and away from shirts and drawers, will unquestionably be with us right along. It is significant that last fall, when deliveries of heavy-weight ribbed union suits for men were almost unobtainable for the rest of the season from many good mills, shirts and drawers could be had from equally good mills for delivery within a week or two.

A shortage in fleeced goods for nearby deliveries accompanied the shortage in ribs last fall. There may have been mysterious reasons for this, including a revival of consumer interest in fleeces, but to the market student it appeared to be nothing more than a normal development resulting from a combination of previous light buying and further restriction of output by fleeced goods manufacturers.

That the fleeced goods market has reached the lowest point of its decline is not at all probable. The quantity of these goods which can be sold will undoubtedly decline each year. Manufacturers who do not face this fact squarely are substituting hope for reason.

Balbriggans

1925 was something of a crisis for bals. Mills which had been stubbornly holding fast to their belief that balbriggans somehow or other would "come back" were finally forced to a realization that this is not to be. Here is another branch of the market which can hardly fail to show smaller and smaller sales totals each year.

"There will always be a market for bals." Certainly. But this market is a declining one. The mills which have been eliminated entirely from the business or which have turned their production over to other goods have apparently righted the supply and demand ratio to the extent that 1926 will be a fair year for those bal manufacturers still in the business, but it can hardly be doubted that further downward readjustment of production will be necessary during the next five years.

Light-Weight Ribs

Experience with light-weight ribbed goods for men varied somewhat during 1925, but on the whole it was a satisfactory year for this branch of manufacture, from the production standpoint. The outlook for the current year may be considered good for at least as satisfactory a business as was done in 1925.

At times last year deliveries of well known lines were difficult to obtain. Mills which have gone out aggressively for 1926 business now have a decidedly encouraging volume of business on their books, and healthy expectations of their duplicates. In instances duplicate orders worthy of mention have already been received.

Nainsooks

Last year undoubtedly represented the peak of popularity thus far for the variety of woven cut and sewed underwear which is usually lumped under the classification of nainsooks. 1926 gives every indication of setting still higher records. The volume of business that has been done by representative manufacturers of nainsooks for 1926 delivery is far in excess of that on their books a year ago. They are looking forward, with reason, to a banner year.

The cut-and-sewed manufacturer has taken full advantage of the novelty trend in all classes of merchandise, and his 1926 lines present a bewildering assortment of weaves, patterns and even colors. The business seems to be changing rapidly from staples to novelties.

Not all the knit goods manufacturers who have engaged in the nainsook business have made a success of it. Some of them have retired from the field altogether, amazed at the fact that anyone can make money in a business which is so crowded with manufacturing and merchandising evils. The admitted defects of the business, however, do not alter in the slightest the fact that it is continuing to expand rapidly, and that this expansion is certainly not yet within sight of a point of saturation.

A merchandising feature of an old established manufacturer of flat knit light-weights that is worthy of attention is the considerable publicity being given to combinations of athletic-cut knitted shirts and jean drawers. The idea, of course, is to capitalize the vogue for this type of underwear which has been growing among young men within recent years. It will be interesting to see if a big market can be built up for this class of merchandise.

Women's Goods

Notwithstanding the trend toward cut-silk, glove-silk and rayon underwear for women it is a fact that mills making women's staple cotton underwear, both light-weights and medium-weights, had a fair year in 1925. On the whole this branch of the business is in much better shape today than was the case a year ago, and the outlook is contemplated with a fair measure of confidence.

In this case as in others the reason for the improved status may be found in the smaller production of staple cotton goods that is now available for the market. Mills originally designed for the production of staple cotton goods exclusively have turned at least part of their efforts to other merchandise, notably rayon goods. This has had the effect of clearing the atmosphere somewhat, and of making a better balance between production and consumption of cotton underwear. That it means a returning popularity for women's cotton goods is not to be considered seriously.

Wool Goods

Well established lines of wool goods face the current year with confidence, a confidence which is based on a fairly good year in 1925. Yet it cannot be questioned that wool goods as a class continue to feel the effects of the drift away from heavy-weight underclothing, and that they will not be as popular five or ten years from now as they are today.

Irregularities in the wool goods situation as a whole are illustrated by comparatively recent changes in important selling accounts, and by the withdrawal from the business of a few more manufacturers.

Association Activities

Among the important activities of the Associated Knit Underwear Manufacturers of America which should be mentioned here are its standardization work, and the formation of what might be called a style research department. The latter is still in the development stages, but the standardization work has made real progress.

The advantages of size standardization in any industry are obvious. The knitted underwear association is to be congratulated for having accomplished a big step in the right direction.

Perhaps the most interesting feature of the style investigations being made by the association is that which has to do with balbriggans. If a style appeal can be found which will inject new life into the bal it will be regarded by many in the business as little short of a miracle.

Outerwear Production

Before closing this sketchy review of the underwear situation mention should be made of the further extension that has been made of the manufacture of staple outerwear in mills which were originally exclusively underwear plants. It is a fact that New York State underwear manufacturers are producing a larger quantity of staple sweaters and bathing suits today than ever before, and that they have in some instances made plans for still further increases in this branch of their business.

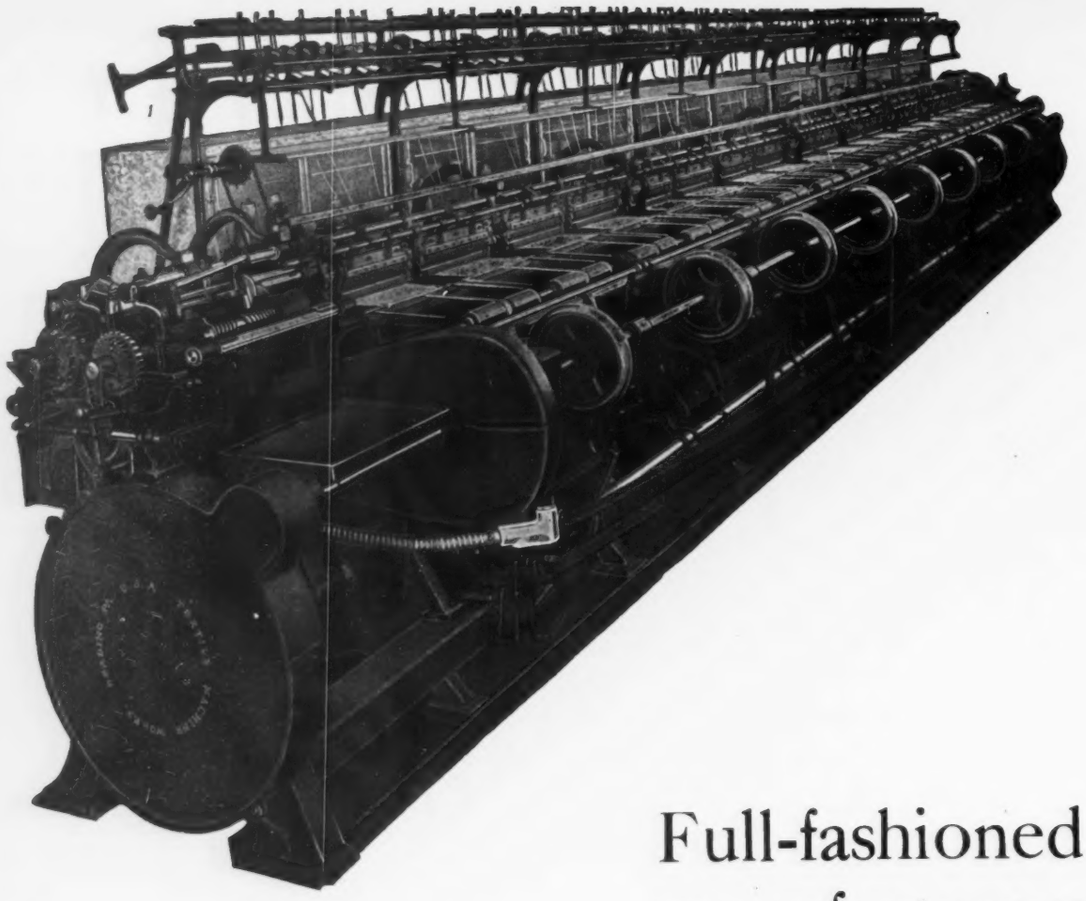
Style Uncertainties in Outerwear

Women's Sweaters the Big Problem—Windbreakers and Crickets Should Have Good Year

THE seventh son of a seventh son could hardly tell just what will be the lot of the knitted outerwear industry this year. In minor respects it is possible to make fairly definite statements regarding the probable course of events during 1926; the major outlines of the business, however, are clouded by style uncertainties. The prophet has a difficult job.

Looking back, 1925 was a sort of in and out year for the principal classes of merchandise which are grouped today under the heading of knitted outerwear. Looking ahead, the best prediction that can be made, with due consideration of facts, is that 1926 will probably follow fairly closely the pattern of its predecessor.

Some of the soothsayers profess to see on the horizon the return to fashion of women's sweaters, but so far there is little that is tangible on which to base this prediction. For well over a year—for the best part of two years now—that fickle female, Dame Fashion, has given the cold shoulder to sweaters for women. The effects of her chilliness have been



Full-fashioned silk hosiery manufacturers who have standardized on "Reading" machines are the most successful because their machines are producers of *quality* hosiery on a *quantity* basis.

TEXTILE MACHINE WORKS
READING, PA.

The "READING"
FULL-FASHIONED HOSIERY MACHINE

the outstanding feature of the business.

Without rhyme or reason that we know of, the style swing away from women's novelty sweaters came upon the industry unexpectedly and almost overnight. It is logical to assume that the vogue for sweaters will return just as suddenly as it disappeared, and without any more notice. This may be in the cards for 1926, and if so it will overshadow all other possible developments.

A Hangover Year?

At this writing it appears as if the features of the current year in the sweater field will be largely those types of garments which are hangovers from 1925. Notwithstanding persistent doubts entertained by the trade as to the importance of the windbreaker this garment has apparently established itself in popular favor to an extent which makes its downfall this year highly improbable; crickets will unquestionably get a full share of the novelty business; considerable popularity for balbriggan fabrics and dresses is forecast, at least for the spring.

Broadly speaking, there will probably be continued progress in the swing toward novelties for men, with more conservatism in patterns and colors likely to be seen. In the absence of a return to their own of distinctly feminine novelty sweaters, the ladies will probably continue to wear garments designed primarily for the male of the species.

Staple Sweaters

Sketchily reviewed, 1925 was a year that may be classed as fair for some manufacturers of staple sweaters, and not so good for others. Initial buying of staples for the fall season was not heavy, despite the attractive prices made, and with the exception of good demand for shakers, the fall and early winter did not yield a large business. It is impossible to say to just what extent the leather, suede and similar types of windbreaker cut into the staple sweater business, but its influence was an important one.

Lines for 1926 have been open now for nearly three months, but up to the middle of January the volume of advance business placed by the jobbing trade was exceptionally light. Jobbers are—or should not be—much concerned over the prices quoted on merchandise for next fall. These prices are apparently all that could be asked for. But doubts regarding the particular types of sweaters which are to be popular next fall have played havoc with advance business. To some in the trade it appears as if there is little to be gained any more by opening fall lines much before the first of the year.

In the low-end field bitter competition between two of the largest producers of merchandise of this character, both sweaters and bathing suits, has featured the business for some years, and there is no reason to believe that it will disappear in 1926. The price cutting done last year on cheap goods brought tears to the eyes of many, and it has been responsible for the decision of a number of mills to keep as far away from the low end of the market as possible.

The influence of the novelty vogue which has affected all kinds of wearing apparel during recent years is beginning to be felt even in staple outerwear. Shaker sweaters are now being shown for the first time in semi-fancy patterns and colorings, the product of a circular jacquard machine. It would be foolish to make too definite predictions regarding the influence these goods will have on the shaker market as a whole, but those who have seen samples of the new merchandise claim that it has great possibilities.

Windbreakers

Steadily mounting popularity throughout 1925 was the lot of the windbreaker, often referred to as a lumberjacket or windjammer. Many men in the sweater business were completely fooled by the new outdoor garment. They kept on maintaining that it was too ugly ever to be good for anything but rough wear, that it had no style appeal; and all the while the windbreaker went calmly on its way to new heights.

It has seemingly demonstrated its practicability for many kinds of sports wear, and seems certain of a big market all through 1926. The recent Christmas season witnessed a regular flood of windbreakers as gifts from adoring wives, sweethearts, etc., to their not so adorable males, which fact in itself apparently guarantees the popularity of the windbreaker through next fall. (Jobbers please note.)

It is deplorable of course, that all windbreakers are not made entirely of knitted fabric. But the part of wisdom is not to fight against an irresistible style tide, but to ride with it as easily as possible.

The widely used suede and leather windbreakers invariably have a knitted bottom, sometimes knitted sleeves, etc. The wise manufacturer is pushing his knitted windbreakers as energetically as possible, but is not passing up any opportunities for business of an accessory nature. An enterprising selling house in New York is now offering a line of windbreakers for beach wear which are made, in the main, from terry cloth—regular woven toweling.

Crickets

Although they had their ups and downs, crickets more than held their own last year, and give every promise of a big season this spring. Lightweight pullovers have always been recognized as one of the most practical and useful types of sweaters, and the cricket has survived a great deal of mistreatment in the way of price cutting, inferior quality and outrageous designing.

It is a noteworthy fact, which has been mentioned previously in this review, that the better type mill is turning to more conservative designs and colors in crickets for spring, which of itself should mean a continued big sale for them. The popularity of matched sets of crickets and golf hose should increase steadily.

The light-weight cricket, with its adaptability for wear underneath the coat of a suit of clothes, has naturally cut into the business on knitted vests. Crickets and windbreakers both are responsible for a smaller market for sweater coats.

Balbriggan Dresses

Another style development of last year which caught many knit goods men flat-footed was the big market built up for balbriggan dresses. Forerunners of the big style swing which came in the fall were visible early in the year, but they received little or no attention from the rank and file of the fabric manufacturing industry.

Better class manufacturers turned out balbriggan dresses which were featured in better class retail stores last spring, but it was not until the fall that the big demand came. Then there came a deluge of business for every mill which could possibly turn out fabrics of the balbriggan class. Demand was far in excess of supply. Many mills bemoaned their shortsightedness.

Those who know something about their subject predict that the coming spring will bring with it another sweep of demand for balbriggans which will outshine that of last fall. Enthusiasts are predicting that at last a type of knitted dress fabric has been developed which will make for itself the enormous market which has always been recognized by students as potential. You may discount their statements as much as you like and still have left the probabilities of a substantial business.

A part of increasing importance will probably be played by rayon in the balbriggan fabric field. Most of the plans which have been laid for this spring include a representative showing of worsted and rayon combination fabrics.

Bathing Suits

The chronicler of bathing suit doings never has an easy time of it, and at this writing it is particularly difficult to talk with assurance regarding the outlook. Last year an ideal early summer created an acute shortage of bathing suits in distributing channels. Jobbers and retailers alike scrambled all over themselves in their efforts to pick up merchandise for immediate delivery, and much merchandise of this character was not to be found. The season wound up in a blaze of glory, manufacturers' stocks being entirely nil.

It was thought that the jobber had learned his lesson from this experience. The reason he was caught short was because of his super cautious advance buying, and the primary market settled itself back in confidence that the 1926 season would tell a different story.

New lines for 1926 were opened last summer with every confidence on the part of selling agents that jobbers would quickly cover themselves for a substantial portion of their requirements. Nothing of the kind happened, however. The jobbing trade as a whole bought just as sparingly as at any time during the reign of the hand-to-mouth policy, and they have not been especially liberal in their operations to date.

In its essentials the bathing suit situation seems unchanged. Repetition of the early warm weather of last year will unquestionably bring about another temporary shortage of quickly available goods. The jobber rests his case on the knowledge that this market is one over which he ordinarily will exercise control—that bathing suits probably continue much over-produced potentially.

Fabrics

Eclipsing even balbriggans in the fabric field last year was the substantial business done on all-rayon fabrics for underwear. This business has grown by leaps and bounds, and its progress has been little short of amazing even to those closely associated with it.

With the constant improvement of rayon, the fibre, it is almost impossible to set any limit for the future expansion of rayon fabrics for women's underwear and dress goods.

Association Work

In even an incomplete review of this kind, brief mention must be made of the attempt made to strengthen the National Knitted Outerwear Association. The program has included the employment of a full time national executive secretary and a distinct separation of the national organization from that of the eastern district. The association has already started an important program of standardization work, beginning with shaker sweaters.

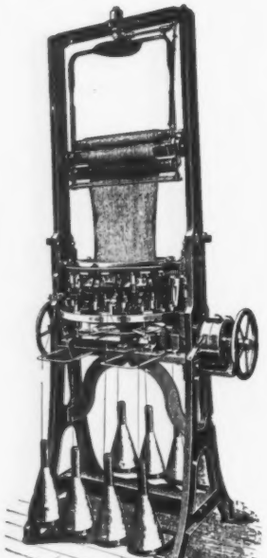
We Have Behind Us—

Continued depression in women's novelty sweaters.
The rise of the windbreaker.
An excellent start for balbriggan dresses.
Hot competition in bathing suits.
A big business on cricket sweaters.

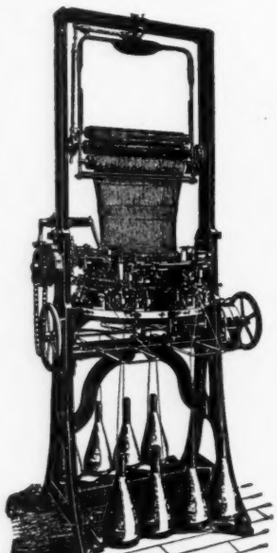
The Future Holds—

Possible quick return of vogue for women's sweaters.
A big year for windbreakers.
Increased popularity for balbriggan dresses.
More hot competition in bathing suits.
Good business in crickets.
Ascendency of novelties in men's sweaters generally.

COOPER'S



Spring Needle
Rib Body Machine



Spring Needle
Rib Top Machine

Spring & Latch Needles and Spring Needle Rib-Body and Rib-Top

KNITTING MACHINES

Rib Cuff Cutting Machines
Automatic Rib Cutting and Folding Machines

CHARLES COOPER'S
Machine and Needle Works

BENNINGTON, VERMONT

New Dyes Appear Despite Difficult Market Year

American Manufacturers Continue to Develop Additional Types and to Fill the Few Remaining Gaps in Their Lines—Market Keenly Competitive in Early Part of Year but Improvement Noted in Fall—Some Phases of Dye Protection Problem

HAVING yielded its place in the limelight to the rayon industry a few years ago, the dye industry has made no effort to "come back" as a popular performer. It had its day of front page publicity and now seems content to settle down as a routine phase of American life.

Which is as it should be. The romance surrounding the creation of a new industry in this country almost over night has ceased to fire the popular imagination—just as have other romantic events which crowded on each other's heels in kaleidoscopic procession during recent feverish years.

But this does not mean that the dye industry has settled down into complacent old age. It has not reached old age—and can't afford to reach complacency. It has had to face all the problems corollary to sudden growth—plus those which have confronted industry in general during the readjustment from a war-time to a peace-time basis.

To the writer, it has been a source of surprise that dyestuff manufacture in this country has not suffered serious mortality—particularly so far as the progress of individual firms is concerned. Organized hurriedly to meet an immediate need, these companies were forced to struggle against tremendous technical and financial difficulties. It would have been quite natural if many of them had fallen by the wayside when price inflation was pricked and when the market became more and more keenly competitive.

And yet, a study of official statistics shows a remarkable steadiness in the number of firms reported annually as doing business during the five years ending 1924. This sequence was as follows: 82, 74, 87, 88, 78.

Furthermore, a knowledge of the industry reveals the fact that not only have numbers remained constant but the personnel has changed but little.

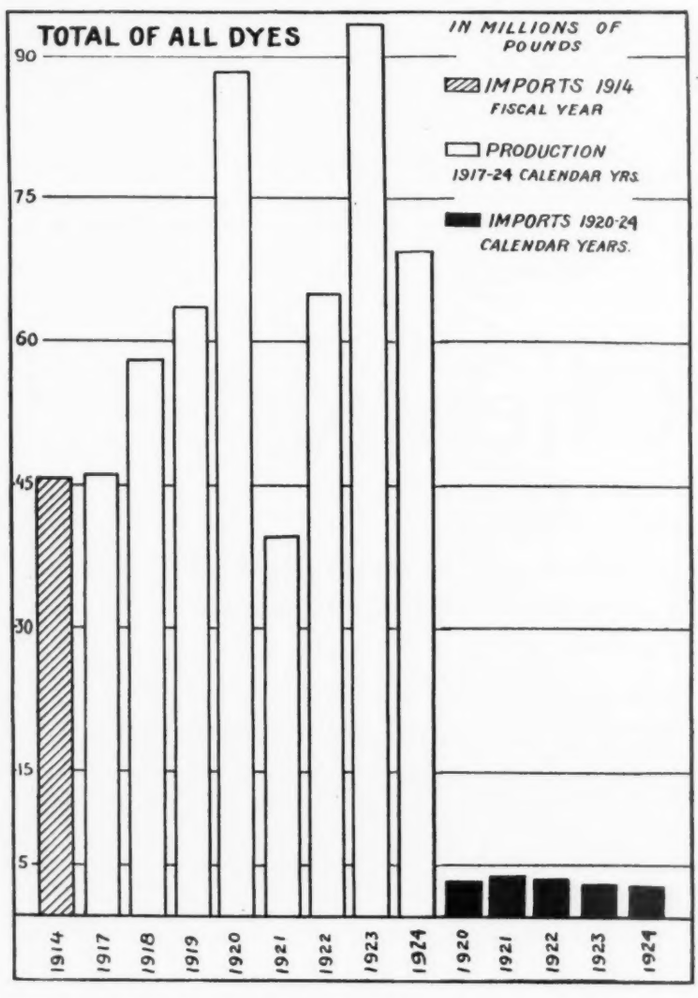
Of these 80-odd firms a few supply a considerable part of the domestic needs, on a poundage basis. And yet the remainder have been able to continue in profitable operation, developing specialties particularly.

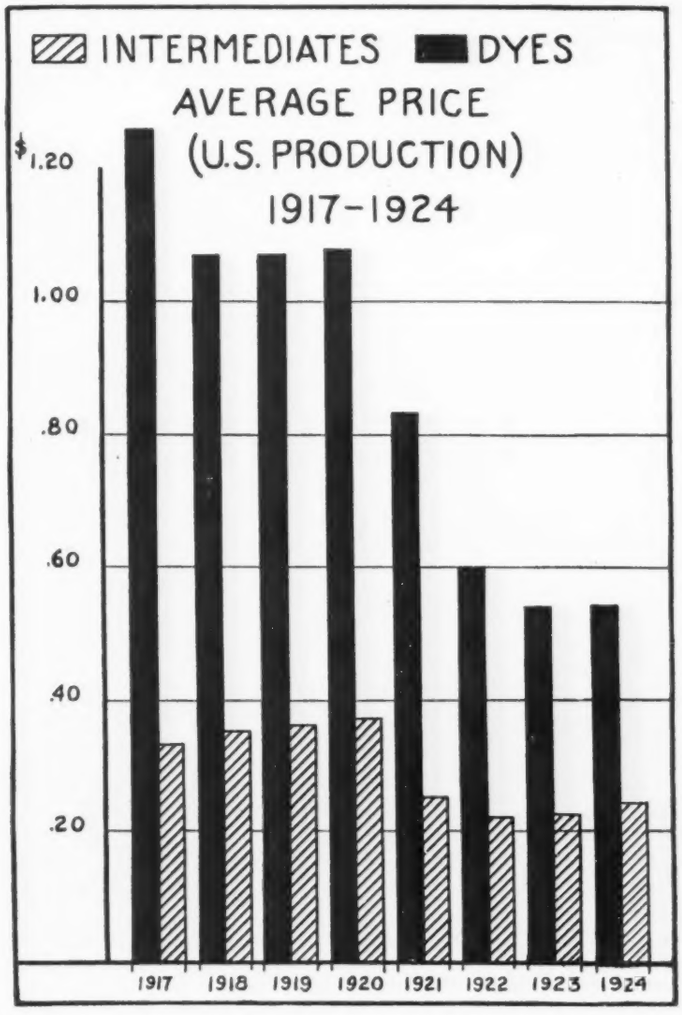
The answer seems to be that the much-discussed monopoly has failed to materialize—and that protection has not fostered a few at the expense of the many.

New Dye Development

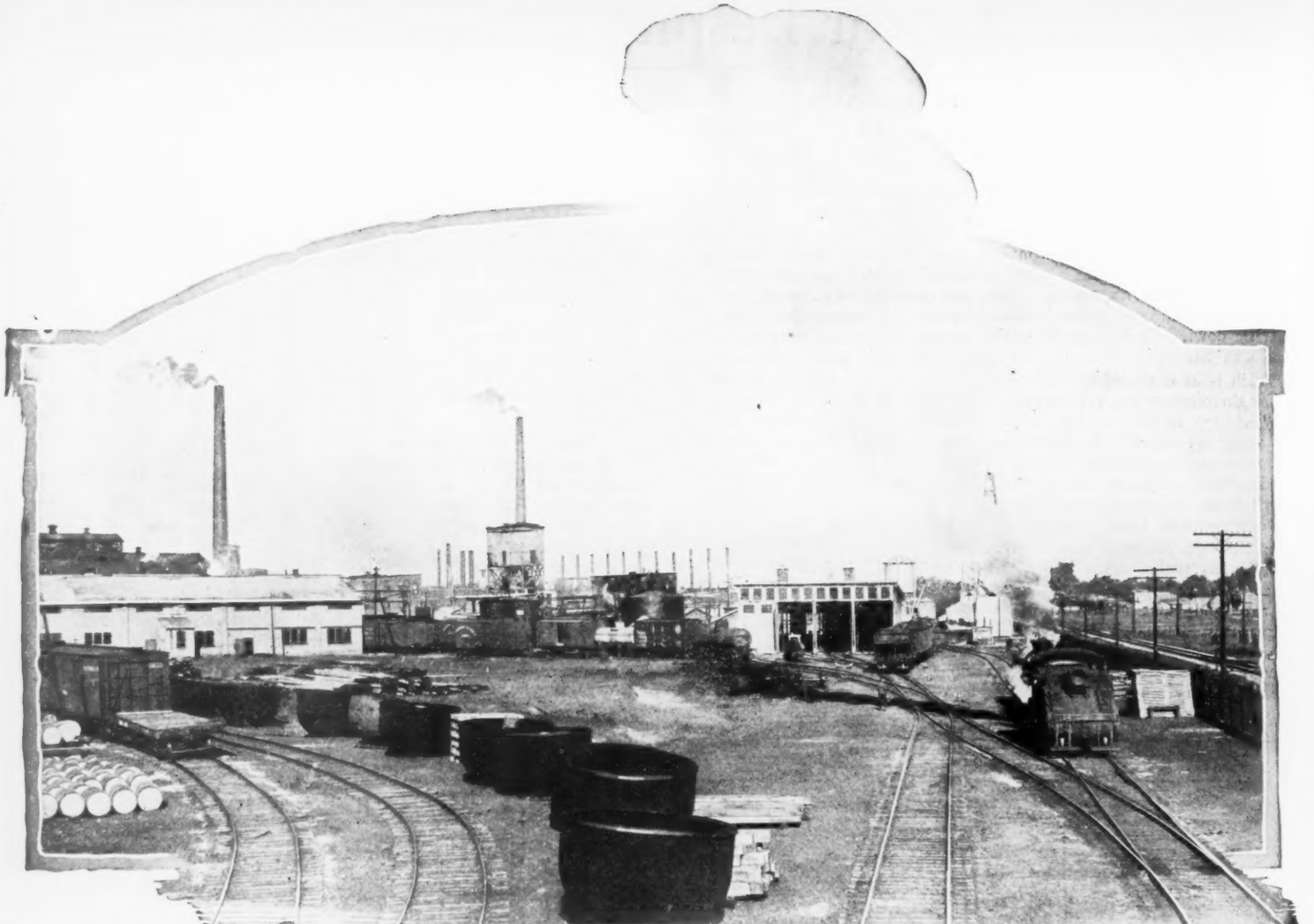
Nor has protection smothered the incentive for further manufacturing development. Early in 1925, TEXTILE WORLD published a list of new dyestuffs announced by domestic producers since the passage of the Tariff Act of 1922. The total was 180 new types. This list was compiled by Dr. Chas. H. Herty, president of the Synthetic Organic Chemical Manufacturers' Association, from announcements made to the U. S. Appraiser when dyes came into commercial production. Dr. Herty has supplemented this list with the following addendum of new types announced during the year 1925.

		Kind of dye
American Aniline Products Inc.:		
Amanil Fast Orange, G L Z		Direct
S R A Pure Yellow	I paste, 10%	Direct
S R A Pure Yellow	II paste, 10%	Celanese
S R A Golden Yellow	VIII paste, 10%	Celanese
S R A Golden Yellow	IX paste, 10%	Celanese
S R A Orange	I paste, 10%	Celanese
S R A Heliotrope	I paste, 10%	Celanese
S R A Violet	II paste, 10%	Celanese
S R A Black	III paste, 10%	Celanese
S R A Black	IV paste, 10%	Celanese
Calco Chemical Co.:		
Calco Methylene Green G		Basic
E. I. Du Pont de Nemours & Co.:		
Du Pont Indigo Solution W		Vat
Du Pont Metanil Yellow EX		Acid
Du Pont Rhodamine 6GDN Ex		Basic
Du Pont Rhodamine 5GDN Ex		Basic
Gallopont Yellow O		Special
Gallopont Orange GG		Special
Gallopont Brown B		Special
Gallopont Red B		Special
Gallopont Red G		Special
Gallopont Red T		Special
Gallopont Violet B		Special
Gallopont Violet R		Special
Gallopont Blue B		Special
Gallopont Blue R		Special
Gallopont Green B		Special
Gallopont Gray N		Special
Halopont Blue M P		Paper
Halopont Blue R P		Paper
Lithosal Acid R B		Lake
Ponsol Brown G Double Paste for		





These Two Charts from the U. S. Tariff Commission's 1924 Dye Census, Show Graphically the Development in Domestic Dye Production and the Steady Decline in Price of the Products



Industrial Chemicals

CHEMICALS
for the
Textile Industries—

Midland Vat Blue Dyes
Synthetic Indigo 20% Paste
Synthetic Indigo Powder
Sodium Sulphide { *30-33% Crystal* / *60-62% Flake* / *62% Solid*
Carbon Tetrachloride 99.7%
Caustic Soda 76%, Flake or Solid

TRADE DOW MARK

The requirements which must be met to keep our own extensive plants in continuous operation parallel the requirements of the industries we serve.

We recognize the importance of steady supplies and try to meet them for our customers as regularly and dependably as is humanly possible.

Send us your specifications. Let us quote on your requirements.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

Branch Sales Offices

90 West Street, New York City

Second and Madison Streets, Saint Louis

Printing	Vat
Ponsol Brown R Double Paste for Printing	Vat
Ponsol Black 2 B Double Paste for Printing	Vat
Ponsol Red Violet RRNX Paste	Vat
Pontahcrome Fast Yellow G W	Chrome
Pontahcrome Fast Yellow R W	Chrome
Pontachrome Green G	Chrome
Pontacyl Black 10 B Conc	Acid
Pontacyl Green NV Conc	Acid
Pontamine Diazo Blue 3 G	Direct
Pontamine Fast Black C W	Direct
Pontamine Fast Orange 2 G Conc	Direct
Pontamine Fast Orange E G	Direct
Pontamine Fast Brown R K	Direct
Pontamine Fast Black LND	Direct
Setamine Scarlet G	
Sulfogene Brilliant Blue 6 BS	Sulphur
Sulfogene Carbon R Supra	Sulphur
Sulfogene Carbon Supra	Sulphur
Heller & Merz:	
Bromo AGX	
Bronze Bromo PL	
National Aniline & Chemical Co.	
National Erie Bordeaux B	Direct
Newport Chemical Works:	
Newport Acid Blue Black Extra Conc.	Acid
Newport Acid Blue Black BG Conc	Acid
Newport Anthrene Black C Paste	Vat
Newport Anthrene Blue 3 G X	Vat
Newport Anthrene Green G G	Vat
Newport Anthrene Scarlet 2 G Paste	Vat
Newport Direct Brown N 3 G	Direct
Newport Direct Fast Brown T 2 G	Direct
Newport Direct Fast Scarlet 4 B S	Direct
Newport Fast Light Scarlet E G	Direct
Newport Light Fast Brown 3 Y L	Direct

Two interesting points in connection with the above list are the new line of dyes announced for application on a particular type of artificial silk, and the number of vat dyes which have been added to the list. It is a commonly appreciated fact that domestic dye manufacturers are meeting the great bulk of the needs of domestic consumers.

Dye Price Movement

Coincidental with this manufacturing development, has gone a gradual reduction in price of American dyes. The average price per pound has dropped from $1.26 in 1917 to 54c in 1924. It is probable that the average for 1925 was somewhat below the latter figure, although no official statistics have been compiled for that period.

Nor is it possible at this time to estimate the total poundage produced last year. It is the writer's personal impression that this quantity came fairly close to that manufactured in 1924 but definite statement on this matter must be withheld until publication of the U. S. Tariff Commission's census.

Market Tendencies

The development which has materialized in producing circles has been in the face of difficult market conditions—particularly during the first part of 1925. The dye industry shared with textile manufacturers in the sluggish movement of the first half of the year—and in the disappointment of hopes engendered in the latter part of 1924. Textile mills operated at only partial capacity and bought supplies sparingly and on a hand-to-mouth basis. Competition among dye sellers was unusually keen and nominal prices were often cut to induce actual business.

In the fall of 1925, improvement gradually developed and dye manufacturers reported a slowly increasing demand for their products—and a satisfying enlargement of their contract business for 1926. This year opened with a decidedly better feeling current in the industry.

Effect of Tariff

Strangely enough, the products which have faced the most serious situation are the specialties and higher-priced colors—the very ones whose production should be encouraged and fostered if the industry is to reach an absolutely self-contained basis.

This is partly linked up with the details of the present tariff protection. Providing, as it does, a specific duty of 7c per lb. and an ad valorem duty of 45% on dyes, the act operates to afford far greater protection to the cheaper or so-called 'tonnage" colors than to the higher-priced specialties.

This is a simple matter of mathematics. Take the case of synthetic indigo, 20% paste. This is quoted on the local market at 14c per lb. The duty is therefore 7c specific plus 45% ad valorem or (6.3c), making a total of 13.3c or 95%. On the other hand, fast light yellow 2G, selling at $2.00 per lb., carries the 7c specific plus 45% ad valorem (90c), making a total of 97c or 48½%. In other words, the "tonnage" product has nearly twice the percentage protection afforded the specialty.

It is the feeling of those close to the industry that a sliding scale of specific duties is the only remedy for this situation. There is ample precedence for this in tariff history. The textile schedule itself furnishes many examples. To cite only one, paragraph 1109, referring to woven fabrics, weighing more than four ounces per sq. yd., wholly or in chief value of wool, provides for a specific duty of 24c per lb. on those types valued at not more than 60c per lb.; 37c on those valued at more than 60c and not more than 80c; 45c on those valued at more than 80c but not more than $1.50.

It is not believed that any agitation is under way for a revision of the tariff in the near future, particularly so far as the present session of Congress is concerned, but this phase of the situation is one which has come in for considerable comment—and which would be emphasized should any change be under discussion. Certainly it is evident that maximum protection should be afforded those colors the demand for which is limited — as it is such types which must be developed to round out domestic lines completely.

Increase in Imports

It is hard to explain the notable increase in dye imports which took place in 1925 as compared with 1924. A preliminary estimate by the Department of Commerce placed last year's imports at 5,112,636 lbs., with a value of $4,644,822—or an increase in quantity of 2,090,097 lbs., or 69%, and of $1,736,104, or 60% in value, over 1924. Last year's imports were much larger than in any year since the war, interrupting the steady decline in imports since 1921.

Fortunately, however, exports increased also, the total for the 11 months ending November, 1925, being 22,795,336 lbs., valued at $6,013,671, as against a total of 14,691,495 lbs., valued at $5,256,435, during the corresponding period of 1924—an increase of over 55% in quantity and over 14% in value.

The Future

Forecasting the future of the American dye industry is comparatively simple. It is here to stay. It is no longer a questionable phase of American life. A large amount of capital is tied up in it—and this capital is being employed to good effect in the development of further research and productive effort. It has won the sympathy and support of textile manufacturers — who now realize that American dyes, type for type, are fully equal to any made elsewhere.

The full realization of the dye industry's possibilities, however, depends upon further development of export outlets for its products and upon still more intensive work along the lines of successful merchandising and broader technical service to consumers. Dye manufacturers themselves are fully aware of these facts, and there seems to be no reason to anticipate anything but increased progress, year by year, in American dye manufacture.

A Plan to Develop "Fast Color" Sanity

Program Outlined by Harrison F. Wilmot Would Provide for a Central Laboratory Controlled by a Cooperative Organization of Dye Makers, Textile Manufacturers, Wholesalers and Retailers—Would Standardize Test Methods and Nomenclature for Expressing Fastness

PROBABLY never before in textile history have so many different groups been considering, at the same time, the question of color fastness. Retailers, wholesalers, converters, finishers and textile chemists are discussing the matter in associational meetings—and as individuals.

Naturally it is not a new problem —but it has been made more acute by the increase in so-called "fast color guarantees." The question has naturally arisen: What *is* a fast color guarantee and what does it guarantee.

It is appropriate that each of these groups should interest itself in the matter—because it is one which concerns the progress and reputation of all. The color fastness problem starts back at the dye producer and carries through every factor concerned with textile manufacture and distribution—to the ultimate consumer.

It is, primarily, a technical problem—and secondarily, a commercial problem. Its merchandising application must remain obscure until its fundamental basis is determined; that is, until accurate designations are determined upon which will adequately express the fastness qualifications of dyed fabrics. No such standards exist today.

A Definite Plan

Consequently the writer was interested when he encountered a man with a definite plan for their development and application. Harrison F. Wilmot, technical advisor of the Synthetic Organic Chemical Manufacturers Association of the United States, has devoted a great deal of time and thought to this problem and has developed a theoretical program of action which he outlined to the writer as follows:

1. Organize a cooperative body comprising these factors:
   - **a. Dye Producers.**
   - **b. Textile Manufacturers and Finishers.**
   - **c. Wholesalers.**
   - **d. Retailers.**

2. Establish a *central laboratory*, supported and controlled by the above named organization—and supervised by a Board of Governors. Man it with capable dye application chemists and equip it adequately for the purpose.

3. Proceed, at this laboratory, to: (a) Standardize the methods of making fastness tests. (b) Standardize the manner of expressing fastness.

Operation of Plan

Here is how the plan would work:

Having developed satisfactory standard test methods, this laboratory would be in a position to receive and test dye samples from the producers and report, by means of its standard nomenclature, the definite properties of such samples. For example, a certain product might be rated at: Light fastness, No. 3; washing fastness No. 6; perspiration fastness No. 2; fastness to storage No. 7—and so on.

Going on down the line, a textile mill buying dyes could submit samples of products submitted to it by dye manufacturers and could receive similar reports which would enable it to purchase its materials intelligently and to know in advance what fastness it can secure from these dyes.

Similarly, it could submit samples of its dyed fabrics and thus be enabled to offer these to its customers as pos-

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sessing certain tangible and recognized fastness qualifications.

Next, the merchant converter, wholesaler and retailer could submit samples of fabrics from its lines—and learn whether the original seller had represented them properly—and also what properties they, in turn, could guarantee to their own customers.

Finally, goods could be sold over the counter with definite fastness specifications and the ultimate consumer, after a certain amount of education, could buy with the assurance that the representatives of the retailer meant something.

The Results

The many ramifications of such a plan and the results to be expected are obvious. Primarily, it would supply the honest manufacturer and distributor with information which will enable him to capitalize on his honesty. (Today, it is rather difficult for many, with the best intentions, to be honest in their representations.) Similarly, the plan would check the activities of the dishonest mill-man or merchant. As an incidental result, it would tend to eliminate, to a large degree, the collusion between dishonest dyers and unscrupulous dye salesmen. It is unnecessary to remark that these are a very small minority but their activities are such as to cast discredit upon the great majority of honest buyers and sellers who are trying to play the game squarely.

Such is Mr. Wilmot's plan. To the writer, it appears sound enough and promising enough to warrant the interested consideration of all those anxious to reduce fast color hysteria, to fast color sanity.

Quick Deliveries in Job Finishing

Faster Movement of Goods a Recent Development in Converting Trade—Requires Basic Changes in Mill Methods—Finishers Must Grasp Importance of Time Element—Converters Value Reliability Even More Than Speed—Too Much Cloth Stored Between Processes

By B. A. Thresher

THE last two or three years have witnessed two developments of fundamental importance in the piece-goods finishing trade. The first of these is the enormous growth of fast color work, both in prints and plain shades. The second is the quick movement of goods. The problem of quick deliveries by the finisher is worth careful analysis from a dispassionate point of view, because it is not only complex, but often produces hard feeling. The whole matter of speed in processing goods is so often looked upon as a kind of standing grievance between the finisher and his customer that a clear and unbiased study of the causes and possible remedies is rarely made.

The converter begs, threatens and cajoles in the effort to get his new lines or samples finished and on the market as soon as possible. Often he disregards the most elementary logic of plant capacity and the limitations of human energy. On the other hand, finishers, in many instances, have not realized the fundamental nature of the change in trade conditions, and have merely applied the "hustle" idea to their mill organization, marked all orders, or most of them "Rush", and trusted that the goods would come through fast enough to satisfy the trade.

Necessity of Scheduling

Converters have failed to take into account the basic changes that have to be made in factory practice and habits, to change from a four-week delivery schedule to one, say, of two weeks. Finishers have failed to realize that requirements of speed are getting down to such a fine point that hustle and rush will not help further. What they will need now is careful planning and scheduling of work. It is no longer effective to start an order in process, and tell every overseer to "Rush it through." Nor will it help to have two or three lot-chasers following the order on its course through the mill. That sort of policy inevitably leads to a situation where every lot is to be given preference over every other lot, "which," as the geometry books used to say, "is absurd."

The converting trade learned a hard lesson in 1920 and 1921, when they were left with heavy stocks on their hands which they could not move except at drastic sacrifices. They learned the same lesson of quick turnover that retail stores learned 15 and 20 years ago. And with this, they learned that if stocks are to be kept to a minimum, and yet satisfy their customers' wants, some very careful planning would have to be done. Anybody can lay in a big stock of a commodity, and then sell it bit by bit, until it is finally all gone, provided the demand holds. But to stock just enough to satisfy immediate demands, and yet not lose business, is a trick that takes some pretty close figuring.

The accompanying article touches on a subject which has been considered by TEXTILE WORLD in previous issues, namely, the importance of careful plant management in a job-finishing works. The author re-emphasizes the significance of the human factor in this connection—and in addition rightly points out that the whole problem is not one which concerns the converter alone or the finisher alone—but which demands the best cooperative effort of both.

Among other things, it requires close scheduling of purchases. When a merchant is carrying a week's margin of goods, he cannot afford to have a two week's delay in the delivery of his goods; loss of business is inevitable if that happens. And if he is bringing upon the market novelties, dependent on fashion, or on season, it is doubly important that he get his goods at exactly the time when he needs them. It is a case where as the lawyers say, time is of the essence of the contract.

Controlling the Time Element

It is this time element in his work that the average commission finisher has not succeeded in coping with. He is generally competent to handle the run of technical and processing problems that he encounters. But he thinks of time in terms of haste, and consequently of pressure—mental, physical and nervous pressure. Hence the distracted air which he often wears when his customers call for earlier and still earlier deliveries.

But the time element of any job can be analyzed, controlled and apportioned, just as much as the space or machine elements. So what the finisher will have to do is not to hustle and rush and exert pressure on his organization, but sit down and figure out, first, just what he has to do, and second, how long it will take him to do it.

The problem, basically, is an engineering one, because it involves, oftentimes, fairly complex relations of machine characteristics and nature of product. But the whole question is simply one of common horse sense, in any case. Anyone who is a judge of human nature knows that the man who never seems to be rushed or flurried, gets more work done than the man who works with a great bustle and confusion. The same principle applies even more strongly to industrial organizations as a whole. Where there is least haste, there is also least delay. To confirm this, observe any large railroad terminal, where train movements are taking place on the second all day long. And yet you never see a railroad man hurrying, because he knows what he has to do, and how long it will take him to do it.

Now the answer to these arguments which finishers and print works men generally bring up is the complexity and changing nature of their work. There are so many lots in process at a time, they undergo so many different kinds of treatment, and are so constantly changing, that it is wholly impossible to keep track of them systematically, or to schedule any lot for handling at a given place and a given time.

Of course the reason these arguments are still used is that finishers have worked for so many years without having to pay much attention to the time element in their work, that they don't know how to go at controlling it, and consequently jump to the conclusion that it cannot be done. Now a railroad is a pretty complicated affair. But suppose a railroad man were to argue that there were so many trains and so many different stations all over the line, and so many possibilities of delay, that what with one thing and another, it was no use trying to run trains on schedule, but that the best he could do would be to start them off whenever he could, and get them over the line as fast as he could.

Naturally no railroad man ever talks that way, because the nature of railroading is such that from the very start, the time element had to be taken into account, schedules developed, and the whole system tied together to work without haste and without delay.

I was in Dayton, Ohio, at the time of the Dayton flood in 1913, when they ran trains on the hit-or-miss principle for a couple of weeks until things got righted. You would walk down to the station and ask when there would be a train for Cleveland. The agent would say he didn't know, but there might be one tomorrow, that they were doing the best they could, but it might be a couple of days yet. Two days later you would arrive at the station at eight o'clock, and the train would be announced for ten: it would leave at twelve, run three blocks and wait until the middle of the afternoon.

Converters Want Reliability

Since that experience I realize how a converter feels when he asks for a delivery promise on his new line. The same sort of good intentions, postponements and uncertainty are likely to follow. So the converter, in self defense, allows a couple of weeks leeway, and keeps hounding the mill every few days on the principle that the man who makes the most noise will have his wants looked after first. The mill accordingly, discounts a large part of this apparent urgency, because it thinks it may be a cry of "Wolf, wolf," and the customer may not be in nearly such a hurry as he would have them suppose.

Any business man knows that such

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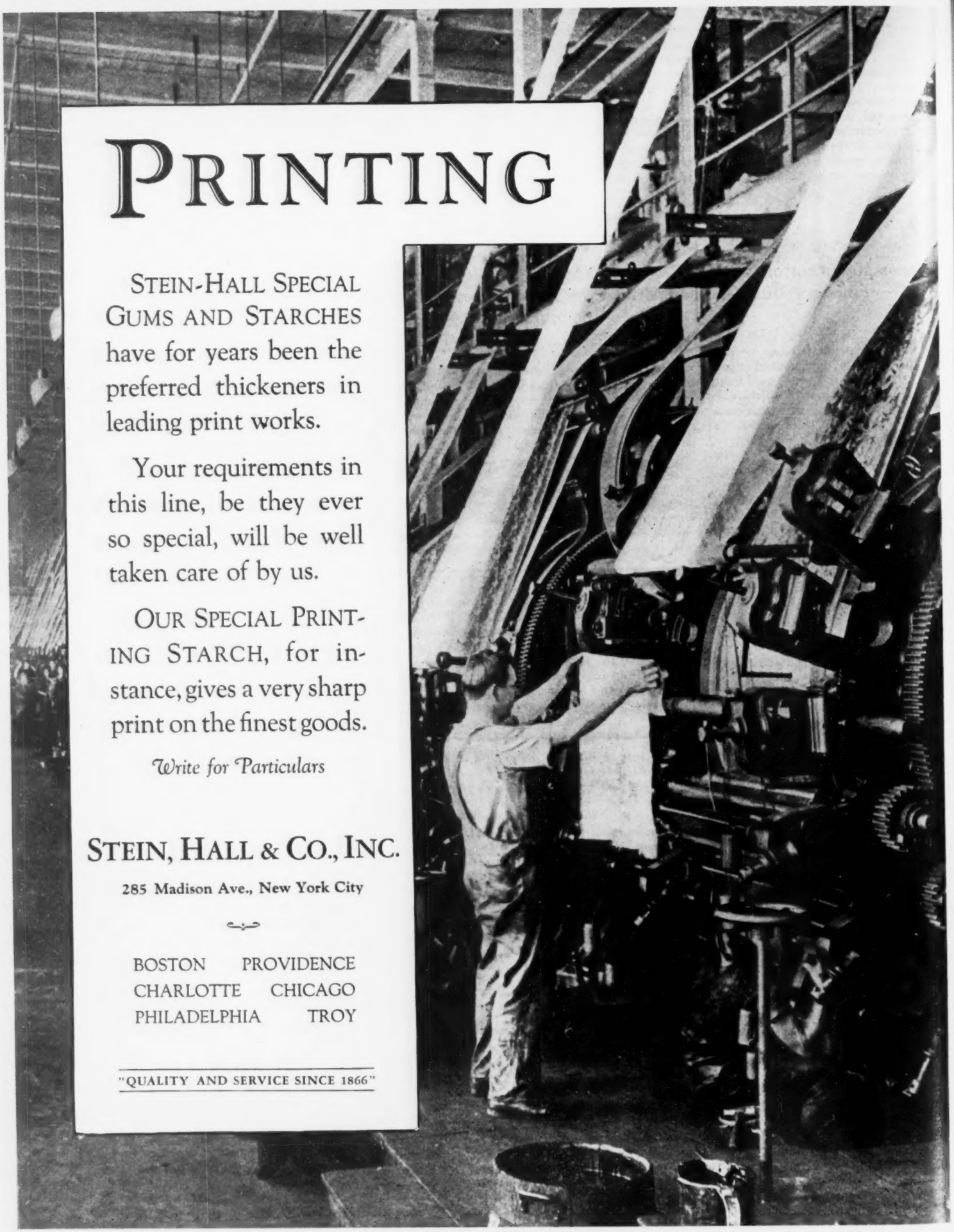

a state of sentiment is unsound. It leads to uncertainty, bluffing, and bad feeling. If the converter stops to analyze his situation, he will probably realize that what he needs is not so much *speed* alone, as *reliability*. In other words, if the finisher can say to him: "Your line so-and-so will start in work on such a day. We can give you unfinished swatches on such a date. Samples for approval of finish will be ready on such a date; if you wire us your approval of finish the following day, we will begin shipment on such a date, definitely, and send you three cases a day from then until the order is completed"—if the finisher can say that, the converter will not care if the total time is not as short as he might like, *because he knows what he can count on.*

Time is money. No finishing concern would think of being as lax in figuring charges and discounts as most of them are in permitting delays to creep in when completing job orders, yet the loss to the converter may be just as real in one case as the other. On the other hand certain practices of the converting trade tend to make it more difficult for finishers to render reliable service, so that there is opportunity for both parties to contribute to the needed improvement in the situation.

One of the most troublesome sources of delay in finishing work is lack of complete finishing instructions at the start. This may mean simply that a lot is ordered bleached and held in white stock until complete instructions are received. This is simple enough for the mill to take care of, in theory. But if a rush order then arrives for printing or dyeing the goods, it may not be possible to fit them into the schedule of other work on hand, as it would have been, had complete instructions been available at the start. Last-minute changes in assortments for color combinations of print goods lead to the same trouble. They make it hard to lay out a print machine schedule that can be adhered to. And worst of all is the lack of put-up instructions when the goods are all finished, with the accompanying lack, often enough, of the special boards and tickets that the customer may insist upon for his line.

These, of course, are all elements in the general trend which is making job finishing more and more of a special service, fitted individually to the needs of each customer, and hence differing radically from a manufacturing industry that has complete control over every detail of its product. But these are all points that can readily be adjusted between the finisher and his customer. If the latter realizes that better service will actually result, he can afford to make some concessions in the way of lining up his orders in advance and sticking as nearly as possible to his original assortments.

Granted these concessions, the bulk of the reform must then come from the finisher. It is futile for him to expect any material change in trade requirements for the sake of making his work easier or more convenient. In the last analysis, he is not simply turning out a product, but rather, rendering a service, in which promptness and reliability are essential factors.

Storage Between Operations

The first thing that strikes the eye, in studying the causes of delay in a job print or dye works, is the length of time orders lie in each department waiting to go on the machines. Where, as is often the case, the total number of successive processes through which the goods pass is as high as 12 or 15; a very little slack ahead of each of these amounts to a serious waste of time in the aggregate. Therefore the first step in eliminating delay is to determine exactly how many hours a lot is actually running on the machines or else in actual transit, and how long it is lying on the benches waiting its turn.

That brings us at once to the crux of the matter, which is the size of the reserve supply ahead of each department or operation. It is very hard to persuade the average overseer that the size of these reserves is what determines the speed of a lot through the mill. For example assume a print room with a capacity of 100,000 yds. per day, and white storage room with a stock on hand, ready for printing, of 500,000 yds., which is certainly not an unreasonable figure as compared with the practice of many plants. Now it is obvious that the average lot of cloth passing through this stage will have to lie in storage five days, during which time it is wholly inactive, and eating up interest charges on the converter's investment.

It is also pretty obvious that although one particular lot, of perhaps 10,000 yards, may pass through this white stock rapidly, remaining there only a day,—that in such a case the remaining lots will be held back by a corresponding amount of time. So that every order that is rushed through in a shorter time than the average serves to delay the rest all the more. And when any considerable percentage of the goods in process is due for a three weeks' delivery, while the plant has been averaging five weeks, it means that the balance of the goods will be delayed even beyond the five week limit. In other words, *average* delivery time is the thing that must be reduced, if the mill is to give good service to all its customers, not simply to one or two favored ones.

The Foreman's Viewpoint

There is a very common-sense basis for the usual desire of the foreman to have a reservoir of work ahead of his machines. It enables him always to select the next job with reference to the machine set-up, so as to keep his room running with the least possible delay due to changes, such as cleaning dry-cans after heavy dyed shades have been run, lapping cans to prevent boiling on light fabrics, and, in the print room, perhaps changing the entire lapping of the cylinder for width, threading up an extra thickness of back cloth, or fitting up a machine for duplex work. Likewise, in the finishing department, there may be unevenness in the condition of the tenter clips, making some unavailable for stretching heavy cloth to gray width; calenders may be laced up for chasing, so that it is advantageous to have several chased lots run together. In a word, there are a hundred reasons of this sort which make it to a foreman's advantage to have a little leeway in his choice of the next order to put on a machine.

And such a procedure was all right as long as the mill could afford to keep goods in process for the extra two or three weeks which such a scheme of work-storage called for. Having plenty of work to choose from is really an expedient to avoid thinking. There are so many variables to be taken into account in job work of this sort—variables both to the goods and of machine characteristics, that even the most experienced practical man cannot carry a complete picture in his mind of what work is ahead, and how it should be scheduled and planned. As a result, his only defense was to have a store of lots ready. Otherwise he ran the risk of having machines waiting for work part of the day, with consequent high unit costs.

The answer to such a situation is, of course, to use sufficient preliminary planning to keep a smooth flow of work through each process without allowing more than a day's work, or even a few hours' work, preferably, ahead of any one process. If this is done, the time the goods are in the mill can be cut down nearly to the point where it corresponds to actual machine running time, without expensive waits in each department.

Practical Planning

Whether this can be accomplished or not depends on the ability of the planners. So much so-called planning has been undertaken by over-theoretical engineers that I have known mill men to condemn any sort of planning department, as being simply a roomfull of nice-looking young men in white collars, who cost the firm a lot of money, while the foremen, out on the floor, actually put the goods through. Thus it is evident that planning of work in advance must be done by a man who is not only thoroughly practical, and understands the foreman's problems in detail, but also can grasp the main outlines of the scheme of production.

More important than setting up any elaborate system of planning at the start is the thorough confidence and cooperation of the whole organization, not foremen alone, but every man on a machine, and every trucker. A production control system that merely follows up, but does not control, will help very little. And the only way to get effective control is to start gradually, and enforce the handling of orders in the right sequence. Even though the system may amount to little more than a daily tickler sheet sent to each foreman, showing the order of preference in which work ahead of him should be handled, a careful check ought to be kept, to see that this order of work is not deviated from without good cause.

In setting out to plan work it is important to remember that even the most complicated situations can be resolved into simple elements. It is perfectly possible to list all the various characteristics of a machine that may act as limiting factors in determining what work can be run on that machine. The advantage of such a procedure is that it calls attention oftentimes to mechanical defects that could be remedied very simply, thus increasing the general adaptability of the machine. Even though centralized planning for an entire mill may seem impractical, much can be done by a little concentrated brain-work in a few key departments. In any case, the prime object should be to cut down the reservoirs of work ahead of each process.

Re-Handled Work

The next most important single factor to control is the re-handled, or "burden" work. Of course the best way to handle damaged work is to prevent the damage at the source when possible. This is the easiest way out, and it is worth while to spend a good deal of time and energy getting at the causes for damages in printing and dyeing, and eradicating them. But there will always be some work coming through that will have to be re-handled. Some experiment is generally necessary to find the exact treatment for any given damage, such as stains, can-boils, streaks, resist marks and the like. Laboratory tests on small patches are the best preliminary guide, but it is not safe to proceed until a yard swatch has been run on the machine, to test the effectiveness of the clearing on a large scale. Tests of this sort interfere greatly with production, and for this reason a separate installation of dry cans, or even a tenter devoted to such work may save much productive time. Even if such an installation lies idle part of the day, it will save so much in preventing interruptions in the operations of the other machines that its use will be justified.

If regular facilities are provided for this preliminary experimental work, much delay will be avoided. It is easy to lose two or three days in clearing a few stains from a part of a lot, if it is necessary to try out experimental swatches in between regular orders on cans or tenters, with the incidental delay due to washing up cans and changing the mix for the padder.

Another useful practice is to run all returned work that requires re-handling on the tenters, at a specified time, such as the first thing in the morning. In this way, lots that may have reached the put-up are not delayed more than one day at the most by any small part that has to go back for re-finishing. If this is not done, they often lie around for days, because the foreman, naturally enough, hates to interrupt productive opera-

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Standard Finishes

Next to re-handled work, the question of samples for approval of finish is one of the most fruitful causes for delay. The amount of time lost due to this cause is largely dependent on the personality of the converter, and on how particular he is about getting exactly the finish he wants. In a mill that handles its own lines of goods, the standardization of finishes is a fairly simple matter, and much time and trouble can be saved by the adoption of a fixed set of processes for each cloth. In job work, where nobody ever knows what is coming next, where new constructions of gray cloth are constantly appearing, and new effects constantly asked for on the familiar constructions, it is a very complex problem to lay out the sequence of operations in advance. But this does not mean that it is impossible by any means.

Even in a job plant, the bulk of the work in the finishing department at any time is familiar enough, and its exact processing can be laid out in advance. By forgetting, temporarily, all the new lines that may require experimenting, and concentrating on the familiar finishes that are repeated over and over for some customers, the bulk of the work can be accurately planned. It is the old idea of figuring out in advance just what you have to do, and how long it will take to do it. Some sort of production board or chart is a great aid to this work. Such a device must be carefully tended and kept up to the minute, and what is more important, must be actually a guide to laying out work. Nothing is more frequently seen in the mill than a rack full of cards that somebody has invented and set up, only to have it tag along several jumps behind the actual progress of the work, which continues to arrange itself as before, without reference to the control system.

In the Calender Room

The calender room is a place where congestion is especially apt to occur in commission finishing, because different finishes run in cycles with the trend of styles. Schreinered work in particular should be laid out in advance when possible, because it is slow, and thus forms a kind of bottle neck in the flow of work. Added to this is the necessity for changing engraved rollers from time to time, when different fineness of line is required; likewise the necessity for pasting seams, which may add a further element of delay. Silkalines and similar cloths requiring a frictioned finish also come irregularly, as do suitings and other chased finishes. Thus it is evident that the calender room is one where the benefits of careful planning and scheduling may be realized to a high degree, and where the lack of any systematic arrangement of the work is sure to be penalized by congestion in one or another process.

To sum up, the way to speed up the finishing of goods is to keep it on the machines and actually running, not lying on the benches waiting its turn. And the only way to do this is to plan out the work in advance so that all machines can be kept running, even though there is not a large reservoir of work ahead of the department.

Every man thinks his own type of work is one that is peculiarly hard to systematize. He is close to it, and sees all the obstacles, while the other fellow's job looks very simple and easy from a distance. I have cited the Ford Motor Co.'s assembly system to mill men, as an example of carefully timed operation where there is no accumulation of work ahead of any one process. They reply that an assembly job is different from textile finishing because the latter involves successive operations on the same goods, and not simultaneous manufacture of many parts which are later brought together to form the completed article. Now it appears to me that this very fact makes piece-goods work simpler to control, because the scheduling necessary is less complex.

In any case, trade conditions are rapidly forcing finishers to give serious consideration to the time element in their work. While some protest that quicker action is next to impossible, others are setting about getting it, by careful study and persistent trial. It is these latter ones who will get the cream of the trade in the next few years, as prompt and efficient service come to be considered more and more indispensable by converters with heavy investments tied up in cloth.

DYE PRODUCTION FOR LAST EIGHT YEARS

The following table shows comparative dye production in the United States for the last eight years and for 1914. This table is based on reports of the U. S. Tariff Commission.

	No. of Firms	*Dyes Produced*	*Value*	*Average Price Per Lb.*
1914	7	6,619,729 Lbs.	$3,470,096	$0.37
1917	18	45,977,246 Lbs.	57,796,228	1.26
1918	78	58,464,446 Lbs.	62,026,390	1.06
1919	90	63,402,194 Lbs.	67,598,855	1.07
1920	82	88,263,776 Lbs.	95,613,740	1.08
1921	74	39,008,690 Lbs.	32,370,000	.83
1921	74	39,008,690 Lbs.	32,370,000	.83
1922	87	64,632,187 Lbs.	38,779,312	.60
1923	88	93,667,524 Lbs.	51,048,800	.545
1924	78	68,679,000 Lbs.	37,086,660	.54

Chemicals Steady Throughout 1925

Uniformly Healthy Market Ruled During Year—Alkalies Maintained Their Strong Position

THE story of 1925 in the market for industrial chemicals was one of uninterrupted steadiness and soundness. Spot trading dragged from time to time, particularly during the first half of the year, but at no period was there anything resembling a real break. Minor fluctuations developed in quotations on prompt shipments but these were largely fractional and recessions were usually recovered quickly.

Starting the year as the leaders in strength, the alkalies maintained this position throughout the 12 months and never developed anything approaching weakness. Withdrawals on contract were unusually good each month—and the producers were always in the happy position of being well taken care of so far as the future was concerned. Undoubtedly, price advances could have been made and absorbed by consumers, but manufacturers profited by their experience and continued the sound policy of stability. Consequently caustic soda closed the year as it started it—the contract price on the 76% material being $3.10 per 100 lbs., carload lots, at works. Similarly, soda ash was unchanged, being quoted throughout the year, on contract at $1.25 per 100 lbs. for the 58% light material in bulk, carload lots at works; $1.38 in bags and $1.63 in barrels.

Bleaching powder and liquid chlorine also encountered a successful merchandising year. At no time was there any appearance of a seriously over-stocked market. This is particularly significant because usually bleaching powder strikes a snag in the summer months. Withdrawals on contract were well maintained and new bleach contract prices for 1926 made in the fall registered an advance of 10c per 100 lbs to a level of $2.00 to $2.40. This advance was easily absorbed and caused no reduction of business.

Miscellaneous chemicals held remarkably steady throughout the year.

There is every indication that the soundness of the chemical market will bear further fruit in 1926 and that the trend should be one of firmness.

1925 Dye Imports

Comparison with Previous Years — Countries of Origin

The imports of coal-tar dyes during 1925 (preliminary figures) were 5,112,636 lbs., with a value of $4,644,822. This represents an increase of 2,090,097 lbs., or 69% and of $1,736,104 or 60% over that of 1924.

The following table shows the imports of coal-tar dyes for 1925 and for the years 1920 to 1924 together with the imports for the fiscal year 1914. The quantity for the year 1914 was taken from Department of Commerce, Special Agent Series 121, and the value from Commerce and Navigation. The figures for the years 1920 to 1924, inclusive, were taken from the Annual Census of Dyes and Other Synthetic Organic Chemicals, published by the United States Tariff Commission. The final figures for the dye imports of 1925 will be published in the Census of Dyes and Other Synthetic Organic Chemicals for that year.

COAL-TAR DYES IMPORTED

Year	*Pounds*	*Value*
1925*	5,112,636	$4,644,822
1924	3,022,539	2,908,778
1923	3,098,193	3,151,363
1922	3,982,631	5,243,257
1921	4,252,911	5,156,779
1920	3,402,582	5,763,437
1914	45,950,895	9,502,714

*Preliminary figures.

Dyes in Warehouse

Dyes and intermediates remaining in bonded customs warehouse were:

Date	*Dyes and Colors Lbs.*	*Intermediates Lbs.*
July 31, 1925	775,916	1,378,837
August 31, 1925	767,431	1,363,760
September 30, 1925	709,381	1,359,717
October 31, 1925	609,750	1,055,241
November 30, 1925	521,238	746,226

Percentage by Countries

Per cent of dyes by country of shipment was:

	Dec. %	*Nov.* %	*Oct.* %	*Sept.* %	*Aug.* %	*July* %
Germany	44	47	72	62	51.5	57
Switzerland	43	47	10	21	36	32
Italy	4	1.5	3	3	4	2
England	3	1	5	3	3	3
France	2	0.5	3	2	3	1
Belgium	3	1.5	4	5	1	1
Canada	1	1.5	3	2	1	3
Holland	0	0	0	2	0.5	1

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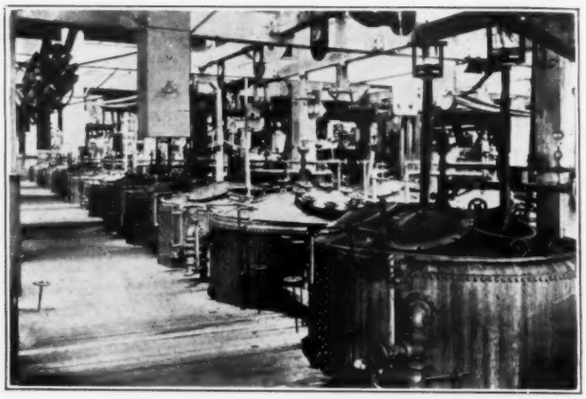

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POWER AND ENGINEERING SECTION

Developments in the Mechanical Department

Power Plant Improvements Being Adopted by Textile Mills—Economies in the Use of Process Steam—New Principle of Operation in Feed-Water Heating—Heat Exchangers for Saving Waste Heat in Process Liquors—Better Dryer Housings—Automatic Temperature Control

THE final results of all improvements and new developments in the textile industry, whether in the textile departments or in the mechanical department, may be classed in one of the following groups: (1) Improved product. (2) Increased production. (3) Lower cost of manufacture. (4) Conservation of natural resources. (5) Conservation of raw material. (6) Reduction of manufacturing wastes. The result of some new improvement or development often will be concerned with more than one of these groups; for if an increased production is brought about the unit cost must necessarily be lessened; or again, any reduction in manufacturing wastes will conserve raw material and will also decrease the unit cost.

In reviewing the year's progress we find that in many instances, while the ideas involved were worked out prior to 1925, the increased use during the last year has been so marked as to be worthy of special mention.

Power Plant Improvements

In listing the developments of 1925 which are of interest to the mechanical departments of textile mills, we must give first place to those concerned with the power plant, and with the greater economies brought about in the use of process steam. The improvements and developments in the power plant have been to a great extent, it is true, worked out and applied in the boiler and turbine rooms of public service corporations only. But many of the larger mills can apply the practices of public service plants to their own power stations, and while no doubt the initiative is being taken by the public service plants, the power plants of the textile mills are vitally concerned in such improvements as they make, and sooner or later will themselves make use of the new methods. And incidentaly, all such improvements not only lower the cost of the final product of the corporation, but they help conserve one or more of our three natural power resources, coal, oil and water power.

The most notable change in power plant work is the tendency to larger units and higher boiler pressures. Boilers are being made to operate at 1200 lbs. pressure, turbines at 600 lbs., and engines at 400 lbs. The temperature of steam has been set at 750 deg. F., beyond which it is not at present considered advisable to go. None of these conditions exist in any textile power plant, for the uses do not warrant such pressures. Probably 400 lbs. is the high limit for any but a super-power station. Extreme high pressures mean skilled operating labor, expensive first costs, and high overhead charges, none of which is attractive to the mill manager. Where the steam, after being used in whole or in part for generating power, can be used for process work, as in a textile mill, the extreme high economies in the power house are not necessary.

Developments of 1925 that are of particular interest to the mechanical department are largely concerned with the increased use of improved methods. In the accompanying article, it is brought out that the most important developments are those connected with the power plant to give greater efficiency in steam production and use. Other matters taken up are the use of heat exchangers to utilize all the waste heat possible in steam-using processes, the better insulation of dryer housings, the wider use of temperature control, the utilization of ball and roller bearings, and the employment of vacuum cleaning systems. It is pointed out that the industry has taken a backward step from the high plane reached during the war in the matter of fuel saving, and that the manufacturing departments should help the mechanical department in checking these wastes.

Fig. 1 shows by comparison the saving made when all or a part of the exhaust steam from a turbine is used for heating or process work. Under non-condensing operation all the heat energy is utilized either for power or for heating. There is no loss except for friction and radiation. In bleeder operation the more steam that is bled the less will be the loss to the condenser. Under full condenser operation the loss to the condenser is tremendous, around 78%. An inspection of this chart will convince one of the advisability of using as much bled or exhaust steam as possible.

Probably the leading development of boiler room practice is the increasing use of pulverized coal equipment. The chief reasons for this are the high efficiencies and high ratings obtainable, ranging from 85% to 93%, the flexibility of the system, the possibilities of successfully burning low grade fuels, and a minimum cost of operation and maintenance. In every installation today the use of pulverized coal must be seriously considered.

Better Refractories

With the advent of pulverized coal and the resultant high furnace temperatures, the need of better refractories for boiler settings and furnace walls became urgent. Also it was seen that it would be advisable in some way to protect the walls from the intense heat of the flame and at the same time help raise the boiler efficiency. As a result, we have the several types of air and water-cooled furnaces. In the air-cooled type there are hollow blocks and blocks with passages left between them laid in the side and bottom settings. Stack draft draws air in through the passages, thereby lowering the temperature of the setting, which in turn prolongs its life, at the same time chilling the ash and slag below the fusing point. The air becomes heated and then enters the furnace through openings, thus supplying heated air for the combustion. In unit pulverized systems only about 20% of the air necessary for combustion enters with the coal.

In the water-cooled furnace, 4-in. boiler tubes in which the boiler water circulates are laid in the setting. In the famous fin-type steel fins 1 7/16 in. wide by ¼ in. thick are welded to the tubes, which themselves are set on 7 in. centers. Thus a continuous sheet of steel made up of tubes and fins is exposed to the furnace heat and absorbs it chiefly by radiation. The results are greater boiler capacities, higher efficiencies, lower flue gas temperatures, higher CO_2 readings, reduced costs of furnace maintenance and less loss through furnace walls. Air-cooled and water-cooled furnace walls are adapted to stoker-fired furnaces as well as to those using pulverized coal.

Air Preheater

The air preheater is another development with the idea of increasing boiler efficiency by raising the temperature of the air supplied to the furnace for combustion. The air passes through tubes or chambers, which are in the path of the flue gases after leaving the boiler and economizer; in fact, the preheator is really an economizer in which air instead of water is the circulating medium. Naturally, it requires a relatively much larger space as compared with the feed water economizer.

We have already called attention to the fact that better refractories were needed. It became evident that much more detailed data should be obtained

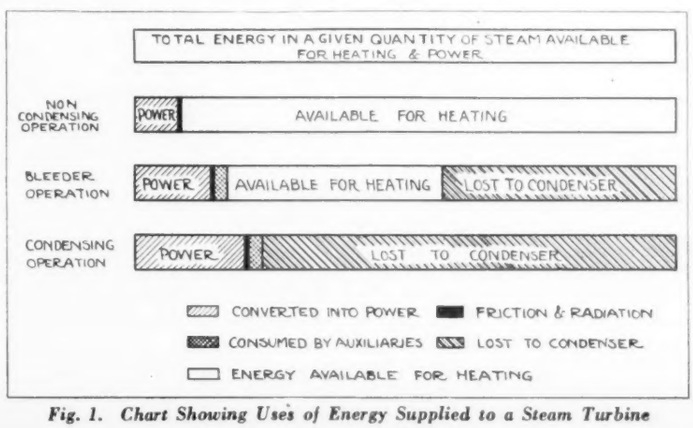

Fig. 1. Chart Showing Uses of Energy Supplied to a Steam Turbine

about refractories in general. A very complete series of tests were therefore initiated by the Bureau of Mines in cooperation with some eighteen power companies. These tests are still going on. Preliminary reports have been published, but much remains to be done. Among the facts to be obtained and actions to be studied are fusion temperatures, distortion underload, spalling or breaking under stresses set up by temperature changes, slag action, expansion and contraction coefficients, best method of laying up the wall, etc.

A second phase of the investigations as applied to stoker-fired furnaces will determine furnace and wall temperatures, effect of draft, preheated air, water cooled walls and insulation on these temperatures; effect of sidewall tuyeres and ventilated blocks on a slag formation. It has been found that when the iron in coal is burned to ferrous oxides, the result is a low fusion temperature silicate which causes the slag to adhere. If the iron is burned to a ferric oxide, the product is a high fusion temperature silicate, in which case the slag will not adhere. Side wall tuyeres and ventilated blocks, by supplying plenty of air, give a ferric oxide, which is the reason that they prevent slag formation. All industrial companies are invited to contribute funds for the carrying on of these experiments.

Feed-Water Heating

In considering feed-water economizers, we find the latest development to be the lead-coated, lead-line steel tube type, which is proof against both internal and external corrosion. Rapid deterioration and expensive maintenance costs arising therefrom have always been a just cause of complaint against the economizer, but these are thus eliminated.

In feed-water heating we find a new principle of operation, applicable particularly to the larger plants but which in time will be applied to the smaller ones. This is the stage-heating principle, or heating by live or bled steam. It is admitted by all engineers that the large turbines, the prime movers, can use the steam most efficiently. Therefore, the growing practice is to drive all station auxiliaries by electric motors. This results in no exhaust to heat the feed-water. Steam is therefore bled from the several stages of the turbines to heat the feed-water, this steam having already been used in generating power. The high economy of using steam for heating that has previously been used to generate power is well known. Where a plant, as is often the case in textile mills, has use for exhaust or low pressure steam, it is better to use steam-driven auxiliaries than motor-driven ones. The former are more dependable, for with the latter, if anything shuts off the electric current, all auxiliaries will stop.

Fig. 2 gives an idea of the increase in overall boiler efficiency caused by improvement in operating conditions, better utilization of waste heat, and the reduction of stack losses. Some of these gains are possible in the super-power stations only where the increased overhead charges of the expensive equipment necessary can be met. In the usual textile plant these extra costs would doubtless overbalance any gains in efficiency obtained. The data for these curves was taken from a bulletin issued by the Republic Flow Meter Co. of Chicago.

A refinement in boiler practice that is being widely adopted is the use of the Tracyfier. This device removes all entrained moisture from the steam before it leaves the boiler, and with the moisture are carried the dirt, mud, and innumerable impurities that are found in boiler water. A series of baffled passages through which the steam passes on the way out collects the water with foreign matter; this is conducted outside the boiler to a trap from which it is discharged. It is claimed, and rightfully too, that more impurities pass out by way of the steam nozzle than through the blow-off. These impurities cause erosion of turbine nozzles and blades, cutting of valves, disks and seats, wearing of packing, sticking of valve stems, and cutting of cylinder walls. By the use of this equipment the superheat temperature will be raised. One per cent of priming causes a reduction of 16 deg. of superheat, and as 10 to 12 deg. of superheat means a reduction of 1% in the turbine water rate, the value of the device will be recognized.

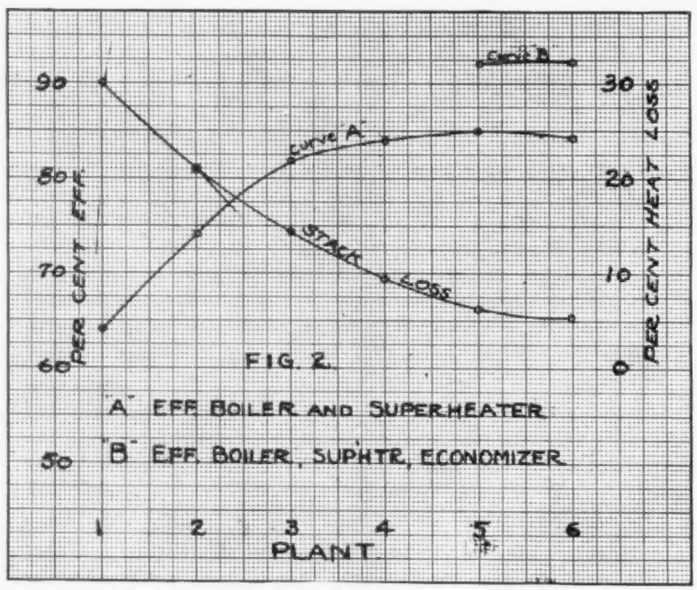

Fig. 2. Increase in Boiler Efficiency by Improvement in Operating Conditions

Internal Corrosion

With the use of higher pressures, larger boiler units, and more expensive equipment throughout came the desire to eliminate internal corrosion as much as possible. With this idea in view, there was developed the deaerating heater. If the dissolved oxygen in the feed-water is removed there will be no corrosion. There are several types of heaters but the principle involved is to use steam at a pressure and temperature sufficiently high to drive off the air, which is then removed by an air ejector. In one type, for instance, the feed-water passes first through a heater which raises the temperature to a point where, when the water enters the de-aerating chamber and flows down over the pans, by reason of the slight vacuum that is maintained in the chamber by an ejector, the dissolved gases are flashed off. The air and gas-free water falls to the bottom of the chamber from whence it is pumped to the boiler. In a further effort to stop all corrosion, which is costing our engineering departments hundreds of thousands of dollars each year, the larger stations are using evaporators to supply distilled water for the make-up. This is, of course, in stations that use surface condensers, and where practically no steam is used for processing.

Welded Pipe Joints

We find that welded pipe joints are gaining in favor, particularly for power house and trunk line work. There is one point to be noted, however, and that is that the safety and efficiency factor depends largely upon the "human equation," or in other words upon the individual skill and faithful performance of the man who does the welding.

Coming to the generation of power by the use of steam we find the number of turbine installations to be increasing, especially in those plants where exhaust or bled steam is used for process work. A steam turbine gives an oil-free steam at varying pressures, depending on the stage from which it is bled. Economy of space is also an important factor and favors the turbine as compared with the steam engine. We find a marked improvement in the manner of cooling the generator windings. Instead of fresh air being continually used for cooling the generator windings, the air is re-circulated, the heat being extracted by the turbine condensate on its way to the feed-water heater. It is admitted that only the larger plants can make use of these ultra refinements, since in the smaller plants the additional overhead costs and extra labor required would multiply any gains resulting from their use.

Valuable studies and great progress have been made in investigating vibration in steam turbine wheels. For a detailed report see the paper presented at the December meeting of the American Society of Mechanical Engineers in New York, by Wilfred Campbell (deceased) and W. C. Heckman. Wheels corrected for axial vibration were known to have failed, and the trouble has been found to be due to tangential vibration. Buckets can be tuned to insure freedom from tangential vibration within the operating speed of the machine, and trouble will be avoided.

Heat Exchangers

Leaving the power plant and entering the mill we find an increasing desire to reduce costs by using for process work exhaust or low pressure steam that has already been used for generating power. In short, the idea is to make power a by-product of manufacturing steam. Coupled with this is the desire to utilize all waste heat possible. The first idea can be carried out by using bled steam from an engine or turbine instead of using reduced high pressure steam. In bringing about the second idea, we find obtainable so-called heat exchangers. By this equipment the heat in spent dye liquors, boiling-out baths, etc., that has heretofore gone to the sewer can be transferred to new water and thus 60% to 75% of the heat content can be saved. These exchangers can be obtained in any size to suit the work.

Dryer Housings

More attention is being given to the proper insulation of dryer housings, whether these be for raw stock, yarn or cloth. Many dryers with so-called insulated housings are found to radiate much heat. A form of panel made up entirely of insulating material, with no metal, has been brought out to be used in place of the commonly used panel consisting of two sheets of thin metal with insulation between. This should prove to be of great advantage.

Temperature Control

The automatic control of temperature for process work and drying is not new, but its advantages are being realized more than ever before. Properly working automatic control is far more close and sensitive than the best manual control, and results in a better product with decreased steam consumption. Lower dryer temperatures for all textile work, coupled with the re-circulation idea, are being recognized as being desirable. High temperatures may do lasting injury to both vegetable and animal fibres and should be avoided if possible. The effect of such high temperatures on the wool fibre especially offers a fruitful field for

research, for therein may lie the real reasons for many manufacturing troubles not as yet fully understood. Work in this line as concerns slasher drying is being done with good results.

A new machine drive of interest is the Tex-Rope drive, which consists of several V-shaped, endless flexible belts made up of canvas and rubber and running on grooved sheaves. This drive can be operated on just as short centers as the silent chain. It is noiseless and extremely flexible, clean, positive, and it is claimed is trouble-proof. No lubrication is required. One special claim is that the shock of starting, as on a spinning or twisting frame, is avoided by the flexibility of the drive, and that this feature reduces the breaking down of the ends.

Anti-Friction Bearings

Ball and roller bearings are used on textile machinery to a larger extent each year, and reached their largest use in 1925 with resultant reduction of power consumed. By using a forced pressure lubricating device the feature of care is easily handled. Their use is being extended on the larger and slower moving machines, such as are employed in the dye and finishing departments.

High pressure grease lubrication is being widely used for the lubrication of heavy industrial machinery, such as automatic stokers, coal conveyors, coal hoists, coal cranes, drying machinery, etc. The adoption of such systems means less wear and reduced breakage, since the lubricant can be forced to every place that it should reach, whereas with the hand grease cup this was impossible, and many important wearing surfaces were never properly lubricated.

Oil purifying and reclaiming equipment is finding more general use, particularly in plants using turbines. This is an instance where the results obtained are not only in the line of reducing manufacturing costs, but they conserve natural products. Such a system, when used in series with the oil circulation system of a steam turbine, enables one to use the same oil over long periods of time. The only new oil required will be that necessary to make up the small invisible loss.

The innumerable possibilities and advantages of monel metal are being realized more than ever. Entire linings are now being fitted into stock, yarn and cloth dye-kettles. Such kettles can be used for a dark shade one day and a light shade the next, since there is nothing to retain the color from one bath that would contaminate the next. This metal is being much used for valve stems, seats, and disks, as it is non-corrosive and is not affected by superheated steam.

Vacuum Cleaning Systems

Vacuum cleaning systems are finding increased favor, not only in the textile departments proper but in the mechanical and engineering departments. Power house floors, walls and equipment are now being kept free from coal dust accumulations by the use of such systems, as also are wood-working shops. The singe room is another place where working conditions can be much improved by the installation of such a system.

The lighting of mills is receiving the attention that it has long merited but has not generally received. It is being realized that proper lighting means better work, increased production, fewer accidents and a higher morale. Eye strain, with the resultant entire body fatigue, can be eliminated by proper lighting. Local intensive lighting must be supplemented by higher general illumination.

An outstanding development in building and construction material is the quick hardening and setting cement known as Lumnite. Aluminates replace the silicates in ordinary cement, and as a result of its use the hardness after 24 hrs. equals that after 24 days when common cement is used. This enables machine foundations, floor repairs, foundation walls, driveways, platforms and under-pinnings to be laid over the week-end and be put to use on Monday morning. Its use also enables one to carry on work in extreme cold weather, when ordinary cement work would be impossible. The chemical reactions going on in the mass by reason of the quick setting develops heat sufficient to keep the temperature above the freezing point, until the danger point is passed. This is of great advantage in many cases.

Spraying Oil on Raw Cotton

A development of the last year that is of great importance to cotton mills is the practice of spraying oil on raw cotton, either in the opening room bins, or in the opener picker hopper. This process has been developed by the Borne, Scrymser Co., and the oil used is their Breton Minerol E. Each picker is equipped with an atomizer or humidifier spray nozzle, but instead of using water and air, these atomizer heads are connected with supplies of air and oil. The oil is sprayed at the rate of about 1% or less; that is, about 1 lb. of oil to 100 lbs. of cotton. All colors of dyed stock and bleached stock are sprayed, as well as the gray cotton. This process does not gum the machinery, but on the other hand brightens the parts and makes them smooth. It is non-injurious to the card clothing, and is beneficial to the wire. It removes trouble due to static electricity. Dust in the air of rooms is reduced and there are less flyings and lint droppings. There is also less waste of the longer fibres and more of the shorter fibres can be used, if desired. In the spinning room there are fewer ends down, and therefore spinners can operate more sides.

Storing Soft Coal

A new method of storing large quantities of soft coal, with the idea in view of reducing loss by heating and fire, is being used by some plants. In this method the coal is spread out in a layer of uniform thickness of two feet over a large area. A heavy power roller is then run back and forth over the surface, thoroughly compressing the mass. The sides are trimmed and another two feet of coal is laid down. The rolling process is repeated and so on until a desired height is reached. In this way a density of 65 lbs. per cu. ft., instead of 40 to 50 lbs. by the ordinary method, is obtained. Not only is spontaneous combustion prevented but the pile is practically impervious to water.

We all recall the intensive coal-saving campaign that was carried on during the war by every industrial plant, and the remarkable results obtained. It is to be greatly deplored that with the ending of the war the greater part of this campaign was abandoned. We knew that the munition factories over here, the ships on the seas, and our boys over there needed every pound of coal possible. Now any saving means only dollars and cents. But, the reader may say, look at the remarkable improvements made in power plant equipment that have for their aim the saving of coal and the reduction in the cost of power. Very true, but it is not in the power plant, but out in the mill proper, that this campaign must be waged. It is the leaking steam valve, the lamps left burning, the uncovered steam pipes, the uninsulated dryer, that are causing more loss than is ever possible in the power plant.

Much could be written on the tremendous wastes in all industries of fuel, raw materials, stock in process and finished products. The past year has seen much accomplished in lessening these, but there is still much to be done. The campaign should be carried on unceasingly and with intensive effort.

Developments in Mill Painting

Savings Made in Many Ways—New Products Coming Into Use—Larger Employment of Spray Painting Machines

By G. B. Heckel

Secretary, Paint Manufacturers Association of United States

THE first requisite in a discussion of developments in paint technology is a conviction on the part of the mill owner that the subject concerns him personally. The "Save the Surface" campaign has left few property owners of any class unconscious of the economic fact that paint and varnish save more than the cost. But for him who is responsible for the welfare of workers in an industrial plant, and for the efficiency of these workers as dividend makers, the subject has bearings that are not so generally appreciated. A clean, well lighted workroom means healthier workers, better work and more work. That paint is an efficient sanitary agent is proved by the fact that hospitals are resorting to the paint pot rather than to the fumigator for large scale sterilization. Paint or varnish will kill bacteria already present and will not afford ready lodgment for those that may be floating about later.

White or light tinted paint also is an effective reflector of light, either natural or artificial, and if cleaned at intervals will remain efficient indefinitely. If a workroom be lighted by sunlight the effective illumination may be increased as much as 40% by painting walls and ceilings white; and if artificial light be used, the same effective illumination can be obtained with 30% to 40% less current. Or with the same current consumption the effective illumination will be correspondingly increased. This increase in illumination, as every efficiency man knows, means more work and better work and a better maintenance of working efficiency.

Interior Painting Pays

But it costs real money to paint the interior of a large mill, and except for the humane considerations involved, the matter becomes a question of dollars and cents. Will it pay? That it will pay and does pay is evidenced by the fact that the more advanced mill owners are practicing it. Figures are not available, but it will be worth the while of any doubter to institute a moderate scale experiment in his own plant. Paint one workroom or one plant and keep a close record of all factors concerned during the following year, such as output, relative time lost, quality of product, labor turnover, cost of power for illumination, comparative spoilage, etc. If the records are properly kept the results will speak for themselves.

Lacquer Products

The outstanding fact in the paint and varnish industry during the recent past has been, first and most conspicuous, the rapid development of the so-called "lacquer" industry. Lacquers have been with us for many years. The term, as originally used, applied to any quick-drying transparent protective coating for metals, and among these were solutions of guncotton, of which collodion is a familiar example. Within the last two or three years, so rapid has been the development in the latter field that the term is now practically restricted to solutions of pyroxyline (guncotton) in various volatile solvents, in conjunction with certain "plasticizers" which maintain the elasticity of the film and facilitate application. A vast deal of research, experiment and patience have been involved in developing these products to their present efficiency.

But the earlier lacquers "set" or dried so rapidly that application by the brush was impracticable. Lacquer as used on automobiles, furniture and other manufactured articles is invariably applied by the spray painting machine, and all over the country there are now refinishing shops that will repaint your machine in two or three days by this method. But lacquer of that type is obviously

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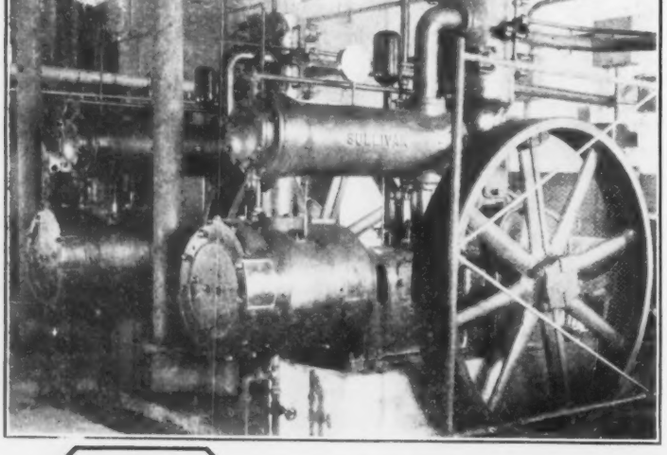

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unfitted for general use; it is "too quick on the trigger." More recent development has been in the line of so-called brushing lacquers, which may be applied by the more leisurely methods of hand painting.

Such products are now on the market. They "dry" quickly, though not too quickly, but are said to permit of the application of any number of coats consecutively, without interruption. The reason is that lacquer "dries" by evaporation of the solvent, while paint and varnish "dry" by oxidization of their oil content. It is too early to predict the ultimate efficiency of these newer lacquers, but the problem will undoubtedly be solved. They will probably not replace paint and varnish, but they must materially affect the industry.

Other New Developments

Three other new developments in the paint industry are worthy of note. The first is the introduction of titanium oxide as a white pigment. It is inert and very dense. It is still too early to predict the ultimate progress of this newer pigment, but it is produced on a large scale and is finding its way into many exterior paint products.

The second of these new developments is the growing use of zinc oxide and lithopone paints, of which the so-called "40-40-20" is typical and is worthy of note. The 40-40-20 type consists of 40% each of light-proof lithopone and lead free zinc oxide, and 20% of inert pigments, ground in refined linseed oil with a small percentage of blown linseed oil. Numbers of paint mnaufacturers are producing paints of this type and the results are said to be generally satisfactory.

The third notable development is the growing use of spray painting machines. These were first introduced because of the economy of time in plants producing automobiles, furniture, etc., and in these they have practically superseded brush work. The general adoption of lacquer for such work has recently made their use in such plants compulsory.

Later they were used experimentally in the painting of structures, exterior and interior, and were found very economical where large unit areas or very rough surfaces were involved. Later improvements have given us machines of such accuracy that striping can be satisfactorily executed with them, and a whole new decorative system of great variety has been made possible by the spray machine.

It is safe to say that but for the opposition of the painters' union this device would now be in very general use. The opposition of the painters is being slowly mitigated by the introduction of sanitary safeguarding codes, and a new generation of expert spray painters is being developed in all sections of the country in the automobile refinishing shops.

Mill interiors are especially favorable localities for the use of this device. It works rapidly, produces an entirely satisfactory coating, and on rough surfaces economizes time enormously. Some of the manufacturers of "mill white" maintain spray painting service as an adjunct of their businesses, but any of the larger mill organizations, especially those operating several plants, would probably find it economical to purchase their own equipment and employ a skilled operator permanently.

Progress in Textile Mill Lighting

Comparison of Old and New Methods and Equipment—Disadvantages of Local Lighting Systems—Value of Reflectors—Light and Vision—New Standard Lamps, Frosted Inside, Permit Easy Cleaning and Simplify Maintenance of Lighting Installations

By J. J. McLaughlin

Illumination Bureau, Westinghouse Lamp Co.

WHILE today there are many textile mills that have, by installing modern lighting equipment and systems, taken advantage of the opportunity of good illumination, there is still a surprisingly large number with poor and inefficient lighting installations and equipment. In the use of bare lamps without reflectors a large portion of the light output of the lamp is lost in directions other than the working plane, whereas a good reflector would redirect this into useful illumination on the work.

It is true that low wattage or small lamps suspended close to the working plane may give the same illumination thereon as proportionately larger wattage lamps suspended higher and symmetrically arranged overhead. However, the low wattage lamps cover only a small area, thus creating intervening dark areas of contrasting brightness, whereas the larger lamps overhead cover the entire machine and floor areas, resulting in uniform and comfortable illumination.

In local lighting systems many more lights are actually required than in the more modern overhead general lighting systems, particularly in textile mills where machines are arranged symmetrically in rows. While in the latter the total wattage may be slightly increased, yet with fewer higher wattage lamps the illumination is increased in greater proportion, due to the higher efficiency of the larger lamps over the small lamps.

A recent case is recalled where the old installation over a long loom consisted of eight 40-watt lamps suspended on drop cords equipped with painted tin cone reflectors. These were replaced by four 100-watt Mazda C (gas-filled) lamps with a much better type of reflector. These four units were hung higher than the small units, thus giving a wide distribution over a large area, with a better resultant illumination, particularly less shadow. While in this particular case there was an increase of 80 watts, nevertheless the light was increased in greater proportion. The eight 40-watt lamps gave a total of 3264 lumens, whereas the four 100-watt lamps gave a total of 5360 lumens. This resulted in a 64% increase in light output for a 25% increase in wattage, with one-half the number of units to maintain.

Light and Vision

Let us analyze in a practical way the advantages of the new and better way over the old and poorer method. First of all, consider some fundamental facts of light and vision. Everyone has seen the effect of light, yet relatively few have had occasion to study minutely the nature of light and how it is produced. It is generally accepted that light, like the invisible forms of radiant energy, is represented as a series of waves which are set in motion by a source, in this case termed an illuminant (or lamp over the machine). These waves are similar to the waves utilized in radio communication, except that they differ in length, the radio waves being many times longer.

The human eye is a receiving instrument tuned to respond to waves of the former or short length. When these waves enter the eye, the nerves are stimulated and vision takes place. Light might be defined therefore as a broadcast wave motion of such a range as to affect the eye and produce the sensation called vision.

Without light, the most important of the senses is useless, for without light even a perfect eye is blind. On the other hand, the manner in which light is used largely determines what kind of service our eyes are able to render. It is quite possible that

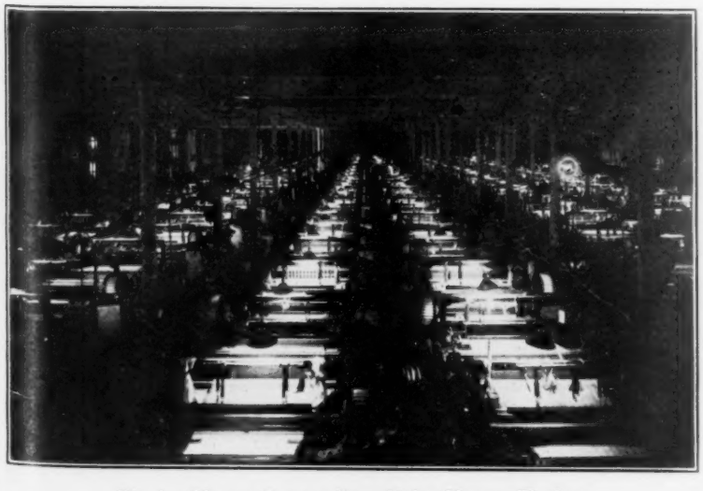

Fig. 1. Gloomy Surroundings Make Gloomy Workers

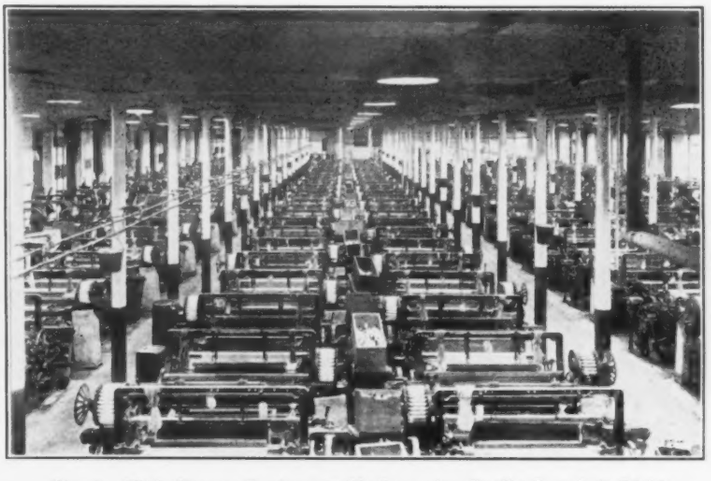

Fig. 2. With Proper Equipment Shadows Are Really Just Soft Lights

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—FOR TEXTILE MILLS—

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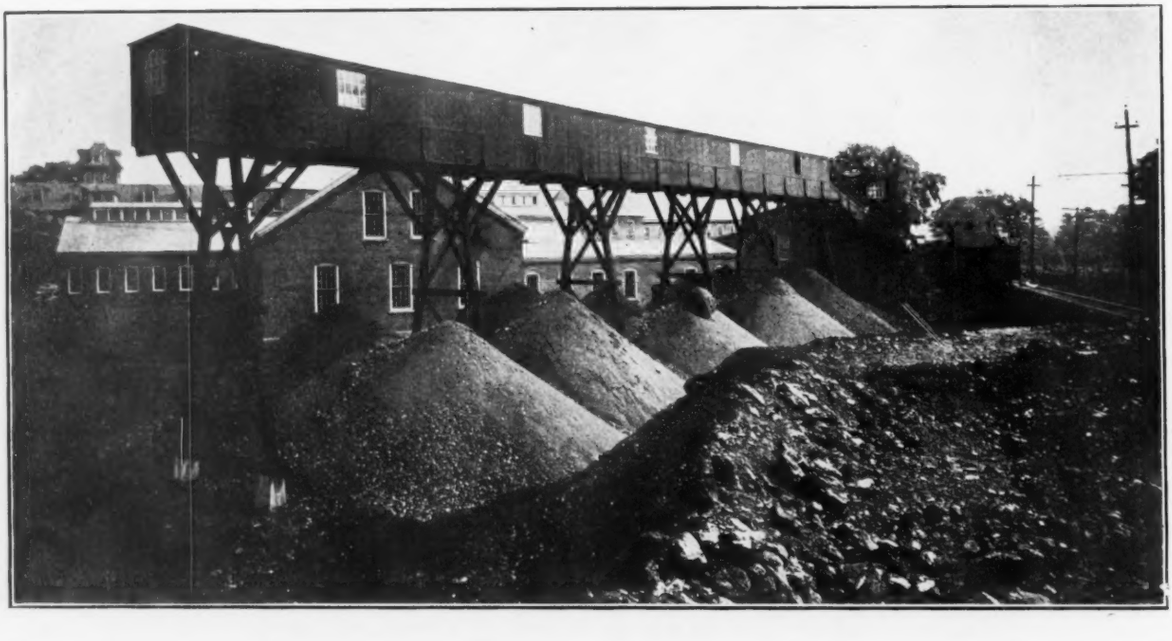

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through bad lighting these delicate instruments of vision may become impaired and defective. If one shuts his eyes for a few moments, he can easily realize how much his knowledge of what is going on in the world depends on light, and he, conversely, needs only to look at the sun for an instant to realize how annoying and harmful a glaring light may be.

Process of Seeing

Look at a building upon which the sun is shining. Through the agency of reflected light, its shape, form and the color of its parts can be distinguished. Instead of stopping or absorbing all the rays, each individual part of the building reflects and scatters a portion of the rays falling on it and absorbs the rest. As a result of this scattering, some light from all parts of the building in the field of view falls upon the eye; furthermore, the parts of the building all appear in their characteristic colors. Yellow bricks, for example, appear yellow because they absorb practically all of the rays except those of wave lengths which are capable of giving the impression "yellow." The eye in like fashion conveys the impression that the mortar between the bricks is brown. If there are any parts of a building which absorb practically all of the sun's light that falls on them, with the result that no visual impression is made, those parts are called black. The white portions of the building reflect nearly all of the light that falls upon them, equally for all wave lengths, and it is for this reason that the pillars appear white.

The shape and form of the building and its parts are made evident by the varying amounts of light falling on the different surfaces and the percentages of this light which they reflect toward the eye. If the building has pillars they appear rounded only because the eye has become accustomed to recognize certain gradations of light and shade as being characteristic of cylindrical objects. Likewise, recesses in a wall are recognized as such because the parts that are in shadow do not receive as much light from the sun, and therefore reflect correspondingly less to the eye.

Again, the amount of light available has much to do with how much we see and how readily and rapidly we see. For example, when examining the works of a watch, it is natural to move over to a window to get the maximum illumination. Likewise in playing tennis in the late afternoon, the ball may be clearly visible when held in the opponent's hand but the light may be entirely inadequate to see the ball when in motion. Such, then, is in brief the process of seeing; a highly complicated one which the eyes are performing constantly.

Value of Reflector

It is particularly important to remember that in both natural lighting and in artificial illumination an object is most frequently seen, not as a result of the light which travels direct from the light source to the eye, but only as a result of the light which travels first from the source to the object looked at and thence to the eyes. Therefore, a bright light directly between the eyes and an object, or near the line of vision, hinders rather than helps vision.

For example, on these fundamentals, compare the bare lamp over a loom without a reflector, with the unit equipped with a suitable reflector. In the first case, the light from the lamp goes off in other directions, to different planes than that of the work, namely the top of the loom. Because a portion of the light strikes the eye of the weaver, and not the object at which she is looking, it is necessary for her to crouch over the loom in order to shield her eyes by change of position. This condition hinders efficient attention to the machine and work, for the fewer motions necessary for operators to take in their work the better for all concerned. By using a reflector the light is redirected to the loom, the eye is shielded and thus the work and the machine parts are seen by reflection. Through the proper type and size of reflector the light is placed where needed; therefore it becomes useful illumination.

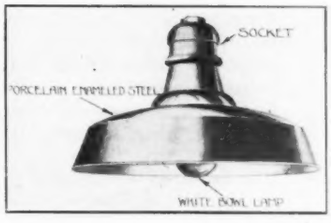


Fig. 3. R. L. M. Standard Dome Reflector

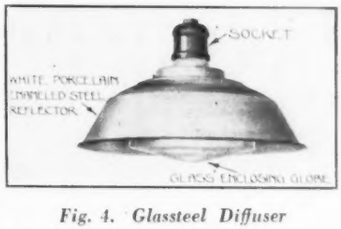


Fig. 4. Glassteel Diffuser

The returns from the investment in good lighting equipment and its proper installation pay the mill owner through the reaction of the workman to better lighting. This may be readily appreciated by comparing the change in a weave room from the old lighting in Fig. 1, to the new lighting in the same room in Fig. 2.

In Fig. 2 may be noted the absence of the deep shadows that appear under the old local lighting installation of Fig. 1. Note the symmetrical spacing and well planned mounting height of the larger and more efficient units. The new system has a smaller number of lamps to be replaced and fewer units as a whole to be cleaned. For, if any lighting installation is neglected and not "policed" at reasonable and regular periods, its efficiency will drop the same as with a neglected machine. It can be seen how well even the fire buckets hanging on the posts are brought out by the overhead lighting in comparison to how they are lost in shadows in Fig. 1. This, while secondary to the actual work on the looms, none the less is very important in facilitating all movements and in gaining a more comfortable vision. Note how well different parts of the looms are brought out; even the aisles are well illuminated, which is very important for traffic movements. All of this is brought about through the change from the old way to the new and more modern method and equipment.

Modern Units

By using modern lighting equipment, such as shown in Fig. 2 (which is the type of reflector shown in Fig. 3), good results are obtained for the benefit of both the mill owner and workman. This reflector is known as the R. L. M. Standard Dome and is made to suit the several lamp sizes, namely 50 to 1,500 watts of the Mazda gas-filled lamps.

The R. L. M. reflector is a standard industrial lighting unit. Although in use for the last several years, it may be in order to explain its merits for mill lighting. The reflector contour or shape is a combination of the shallow dome (which did not shield the light source well but gave a wide distribution of light) and the deep bowl reflector which shields the light source at a reasonable angle. This combination gives both good horizontal and vertical illumination, and with the white bowl or bowl enameled lamps a fair diffusion of light is obtained. This type of unit in the moderate lamp size, such as the 100 and 150 watt, located in working aisles and mounted well above and between machines where the work is in a vertical plane, gives excellent direction of light and overlaps into the adjacent aisle. In workrooms where machines are not high and are open, such as in the weave room, the larger lamp and reflector sizes on wide spacings and higher mountings may be used with good results.

Another type of lighting unit suitable for mill lighting that is finding its way into more exacting places is the combination of the glass and porcelain enameled steel unit, illustrated in Fig. 4. This is known as the Glassteel Diffuser. The unit consists of a diffusing glass globe and a white porcelain enameled reflector somewhat similar in shape to the R. L. M. reflector, directing most of the light downward. This unit eliminates glare and softens shadows.

The reflector has openings at the top which permit light to reach the ceiling, reducing the contrast between the illuminated area below the unit, and the space above it. It is made in two sizes; one to take the 100, 150 and 200 watt; and the other to take the 300 and 500 watt Mazda gas-filled lamps.

New Standard Lamps

During 1925–26, the Mazda lamp manufacturers have brought out a new standard line of lamp. These lamps not only have the good features of the replaced types, but possess additional ones, and as a whole help simplify lighting for all concerned. For example, the new lamps are frosted inside instead of outside as the former lamps were; thus the outside of the bulb, being smooth, permits easy cleaning. While the inside frosting will give good diffusion of light, the absorption is much lower than the outside coating, being about 2%. The new lamps are being made in the sizes 15, 25, 40, 50, 60 and 100 watts, and will replace some forty-five lamps of other types from the 100-watt size down.

While the small sizes may be used for local lighting in mills where this type of lighting is necessary, yet the 100-watt size will find greater use in the overhead general lighting installations. This size has approximately the same physical outside dimensions and light center length as the old 75-watt PS-22 Mazda C lamp; therefore, it may be used with the R. L. M. Standard Dome reflector of the 75-watt size. However, when used in the 100-watt size of reflector, a socket extension will be necessary in order to bring the shorter light center to the correct position in the larger reflector. Such socket extensions are available through the lamp agents, and the device is as simple to install as the lamp itself. The 100-watt A-23 Mazda lamp of this new line is illustrated in Fig. 5.

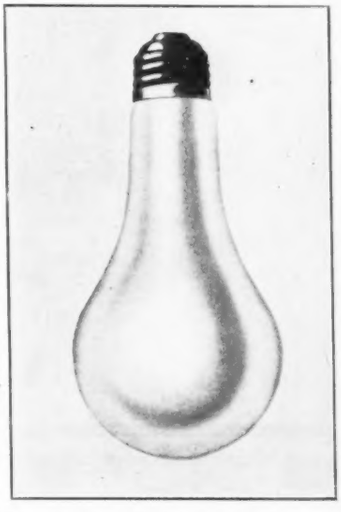
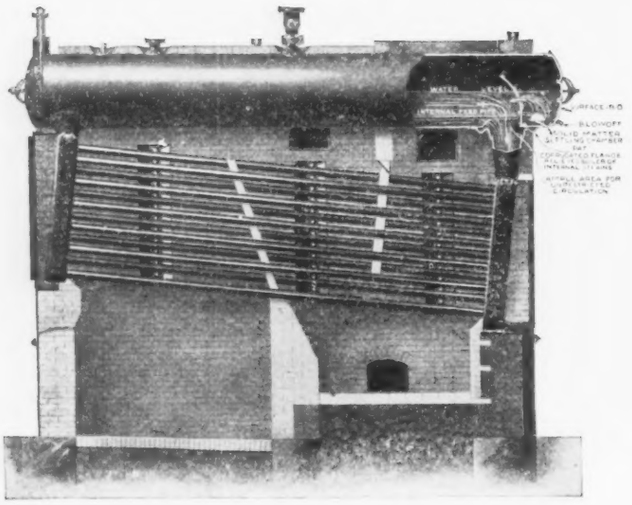


Fig. 5. The 100 Watt A-23 Mazda Lamp of New Line

In conclusion, it may be stated that the lamp manufacturers and the reflector and lighting equipment manufacturers are keeping pace by producing better equipment each year to meet the increased operating requirements of textile mills and other allied industries.

ENFIELD, N. C. A. M. Ellis, proprietor of the Wearproof Hosiery Mills, Reading, Pa., has leased the plant of the Enfield Hosiery Mills Co. for a period of three years and will operate it under the name of Wearproof Hosiery Mills, continuing the production of children's ribbed hosiery there. All purchases will be made at the Philadelphia office of the company in the Ledger Bldg.

UNION BOILERS



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We have many textile installations giving highest satisfaction in every day service.

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York Co. Remodels Boiler Plant

Old Boilers Replaced by New 600 H.P. Water Tube Units—Coal and Ash Handling Methods

By D. D. Eames

Lockwood, Greene & Co., Engineers, Boston

THE York Manufacturing Co. is a manufacturer of colored cotton goods and rayon fabrics. The mill is located in Saco, Me., and has about 112,000 spindles with complete dyeing and finishing departments. The boiler house which supplied the steam for this mill contained, up to last summer, 36 vertical fire tube boilers, each boiler being fired with a small forced draft stoker. The boilers were arranged in a double row with economizers overhead above the firing aisle between the rows of boilers. Twenty-four of these boilers were installed about 1906, and the other twelve several years later. Last winter it was decided to replace the older boilers with new equipment.

The building containing the old boilers is 60 ft. wide inside, with a clear height of 33 ft. under the roof trusses. This exceptionally large building made possible a good layout of large boiler units, and it was decided to replace the 24 old boilers with 2 water tube boilers of 600 h. p. capacity each, making the design so that these boilers would operate normally at from 175% to 200% of rating. The plant, as remodelled, thus has three boiler units of approximately equal capacity, considering the remaining twelve old boilers as one unit. Any two of these boiler units will carry the maximum load of the mill so that the desired flexibility of operation is obtainable.

The new boilers are horizontal, longitudinal drum water tube units designed for 250 lbs. working pressure but are being operated at 185 lbs. pressure, corresponding to the pressure allowed on the old boilers. The new boilers are set singly with a height of 14 ft. from the floor to the bottom of the front header. Each new boiler is fired by a seven retort forced draft underfeed stoker. Stokers are driven by steam engines in duplicate, either engine being of sufficient power to drive both stokers. The stokers are of an extra long pattern, giving a deep furnace, as it was desired to obtain a stoker which would be capable of carrying the desired boiler loads at a very moderate operating speed.

By-Product Power

The York Manufacturing Co. does not generate power except as a by-product of the low pressure steam necesary for dyehouse operation. For the benefit of this turbine, and also to prevent excessive condensation in the long steam mains which radiate from the boiler house to the various parts of the mill, it was decided to install superheaters to give a moderate amount of superheat. A high superheat was not desired on account of the age of the steam mains throughout the plant. A radiant heat superheater was installed in the back furnace wall of each boiler, proportioned to give from 60 to 75 deg. of superheat.

There is sufficient space in the building in front of the new boilers for the installation of an overhead coal bunker. The installation of this bunker has been deferred until such time as the remaining fire tube boilers are removed and additional water tube boilers installed, thus making the requirements for overhead coal handling more necessary. The front columns of the two new boilers have been made heavy enough and long enough to carry one side of the bunker, but no other expense for this equipment has been incurred at present. The coal storage yard contains seven railroad trestles on which the coal is unloaded from the cars. The coal is drawn into the boiler house as required, by a small truck, and elevated from the boiler room floor to the stoker hoppers by a movable belt conveyor, this being considered a temporary arrangement pending the eventual installation of the complete mechanical system with gravity feed from the bunker to the stoker hoppers.

Ash Removal

An ash tunnel was constructed at the rear of the boilers, this tunnel being as wide as the distance from the back wall of the boiler house to the ash hoppers under the stokers.

Each ash hopper is provided with two large doors through which the ashes are shovelled into wheelbarrows and wheeled along the tunnel to the hopper of a bucket elevator, where they are dumped, being elevated and discharged into trucks out in the yard for removal. This ash tunnel is very completely ventilated by the use of subway grating over the entire width of the back alley behind the boilers, and also by the elevation of the floor of the rear combustion space of the boilers, giving a wide air opening from the space directly behind the ash hopper up into the boiler room. This ash layout is designed so that industrial cars may be put in later if desired.

The old boiler plant had two steel stacks, not over 100 ft. high. These being insufficient in height to provide the draft necessary for the ratings required on the new boilers, a new stack was built and the flues arranged so that it would serve not only the two new boilers but also the twelve old boilers. This stack is 200 ft. in height, with a 10-ft. flue; the first figure being determined with reference to the draft requirements of the boilers for the ratings expected, and the second with reference to the number of boilers which are ultimately expected in this boiler house.

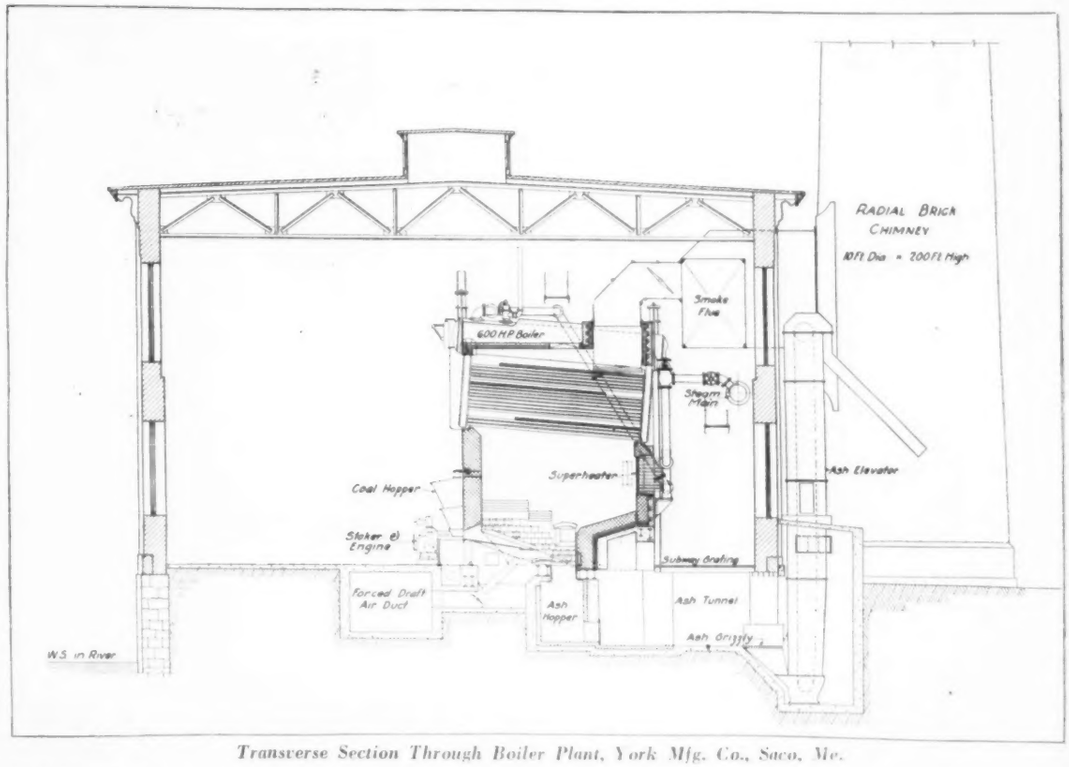
The boiler settings were designed with solid walls but with air-cooled blocks on all four sides of the furnace at the level where clinkers might be expected to form. The front walls of the settings are solid fire brick with a course of bonding tile midway of the height, this bonding tile being attached to a double channel buckstay which is in turn supported on the front boiler columns. The side walls of the settings have 13½ in. of fire brick lining in the furnaces, 9 in. in the second pass, and 4½-in. in the third pass. Expansion joints were built in the walls and every effort made to obtain settings which would remain tight and give a long period of service without extensive repairs. To this end only the best of materials and workmanship were allowed.

New Auxiliary Equipment

New auxiliary equipment for the plant included a turbine boiler feeder and forced draft fan. Each of these units is ordinarily driven by a steam turbine, but each is also provided with electric motor drive for emergency service or for the purpose of obtaining a better heat balance for the boilers under certain conditions. One of the old duplex boiler feed pumps will remain in service as a spare unit. The old closed feed water heaters were also retained, but were re-piped so that they would operate in series instead of in parallel as originally laid out.

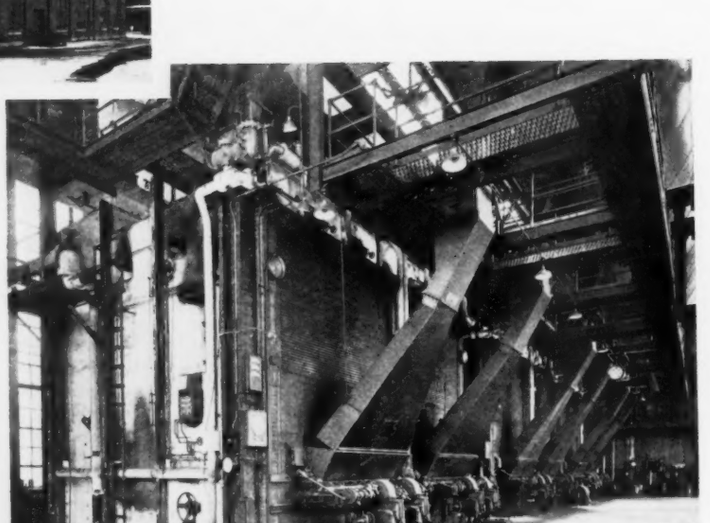
Instruments provided for the plant include a steam flow meter for each boiler, a recording feed water flow meter, feed water thermometers at inlet and outlet of heaters, three-dial draft gauges for each boiler, and recording uptake thermometer for each boiler. Automatic regulation is provided for the stoker fan and engine control and an excess pressure governor on the boiler feed pump. Each boiler has a feed water controller.

The design and installation of this boiler plant was made under the direction of Lockwood, Greene & Co., engineers, of Boston, Mass. Construction work was done by William T. Reed Co., 200 Devonshire St., Boston.



Transverse Section Through Boiler Plant, York Mfg. Co., Saco, Me.

GETTING RESULTS



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REPORT OF MILL CONSTRUCTION FOR 1925

New Mills, Enlargements and Improvements

Construction Work Gains During 1925, Number of New Mills Exceeding Those Reported for Last Three Years—Several Northern Firms Establish Branches in the South—Rayon Expansion Particularly Noteworthy—Year 1926 Holds Promise of Breaking Record of Its Predecessor

A SURVEY of the construction in the textile industry during 1925 shows that the prediction of an upward swing, following the depression of the previous year, became a reality. The activity was enhanced through the realization on the part of manufacturers that to meet the ever growing competition they must readjust their plants and equipment to keep up with changing conditions.

In several cases construction of new units in the South for certain classes of goods was the solution to the problem. Other manufacturers disposed of old machinery and re-equipped their mills with new spindles and looms to meet the demands of fashion, while a few mills merged their interests to lower manufacturing costs. New life was given to a number of old mills when they were acquired by new interests, remodelled, re-equipped and started up after a period of inactivity.

The total of 239 new mills reported during the year was an increase of 53 over 1924, and compares favorably with 1922 and 1923, when 238 and 232 new mills, respectively, swung into operation. While new mills were started in 26 different States, it is interesting to note that 55 of these were established in Pennsylvania, where the knitting industry claims the great majority. New Jersey, with a total of 35 plants started during the year, comes next. Most of the new mills counted in the latter state are located in Paterson, the "Silk City," where the dyeing, bleaching and finishing field runs a close second to the leading industry of the city in the number of plants established.

As manufacturers have awakened to a realization of the possibilities of their plants and have planned and acted accordingly, many extensions are now in the hands of engineers and contractors for execution this year. With so favorable a beginning, 1926 will no doubt exceed its predecessor in construction work.

New Cotton Mills

Of the total of 40 new cotton mills, the South again claims the majority, with 24 plants added. North Carolina, with a total of 13 new mills established within her borders, leads that section. Noteworthy is the fact that three of the new mills erected are for northern firms—the Scandanavia Belting Co., of Paterson, N. J., having purchased land for a new plant at Charlotte; the Pompton Lakes (N. J.) Weaving Co. erected a new brick plant at Pittsboro, N. C., and the Somerset Mills (John Watt's Sons Co.) of Philadelphia, built a 100 loom branch mill at Craigville, near Roxboro, N. C.

Alabama's spindleage has been increased to the extent of 20,000 spindles through the establishment of a branch at Opelika by the Pepperell Mfg. Co. of Biddeford, Me., which erected a modern mill and village in the southern city and transferred machinery for the production of coarse goods from Maine to the new Alabama mill. Eighty new spinning frames were installed in the Biddeford Mill to replace those shipped South.

Borden Mills, Inc., completed their plant, construction of which was started last year, and equipped it with 88,000 spindles and 1,940 looms, most of which were shipped from mills No. 6 and 7 of the American Printing Co., Fall River, Mass.

The Brighton Mills erected a new plant at Shannon, Ga., and transferred machinery from Passaic, N. J., to the new mill. The Galvez Mills organized and made arrangements for the early erection of a mill at Galveston, Tex., to house 14,000 spindles, formerly operated by the Nobska Spinning Co., Taunton, Mass. The Strowd-Holcombe Cotton Mills, Inc., purchased a building in Birmingham, Ala., remodelled it and installed between 8,000 and 10,000 spindles, and complementary machinery for the production of cotton flannel.

Judson Mills, Greenville, S. C., added 150 wide silk looms to their equipment. The American Thread Co. of Georgia completed the first unit of its plant at Dalton, and the Planters & Manufacturers Cotton Mills erected their 10,000 spindle shirting mill at San Marcos, Tex.

In the North the conversion of the Sugden Press Bagging Co.'s plant at West Chelmsford, Mass., into a fancy cotton goods mill, is worthy of note. The Firestone Cotton Mills expended approximately $250,000 for new machinery, increasing production about 20%. The Nashawena Mills, of New Bedford, Mass., erected a weave shed to house 1,680 looms adjacent to the Manomet No. 3, which they bought.

New Woolen Mills

Massachusetts, with six new woolen and worsted mills, was the leader in that branch of the industry. Other new mills were scattered through California, Connecticut, New Jersey, Pennsylvania, Rhode Island, and Texas, all told, 17 mills, mostly small.

Considerable enlargements and improvements, however, were made to existing woolen mills, the following companies having made the greatest expansion: E. E. Hilliard Co., Inc., Buckland, Conn.; Seabright Woven Felt Co., Camden, Me.; Columbia Woolen Co., Lewiston, Me.; Winthrop (Me.) Woolen Mills Co.; Jefferson (Mass.) Mfg. Co.; Pontoosuc Woolen Mfg. Co., Pittsfield, Mass.; A. M. Karagheusen, Freehold, N. J.; Crex Carpet Co., Newburgh, N. Y.; Alex. Smith & Sons Carpet Co., Yonkers, N. Y.; John Zimmerman & Sons, Inc., Philadelphia; Stillwater Worsted Mills, Harrisville, R. I., and Peerless Woolen Mills, Rossville, Ga.

Knitting Mills

The knitting industry as usual walked away with the honor of having more new mills than the other branches of the textile field. The total of 84 new mills may be classified as follows: Northern, 51; southern, 21; western, 10. Having 32 such plants started during the year, Pennsylvania was far above the other States, the next in line being New York with 9, North Carolina 6, Alabama 4 and California 3.

Knit goods manufacturers also, in several cases started new units in the South, among them being the Avalon Knitwear Co., which transferred one unit from Utica, N. Y., to Anniston, Ala., and the Glorie Underwear Mills, of Reading, Pa., which erected a new plant at Eufaula, Ala.

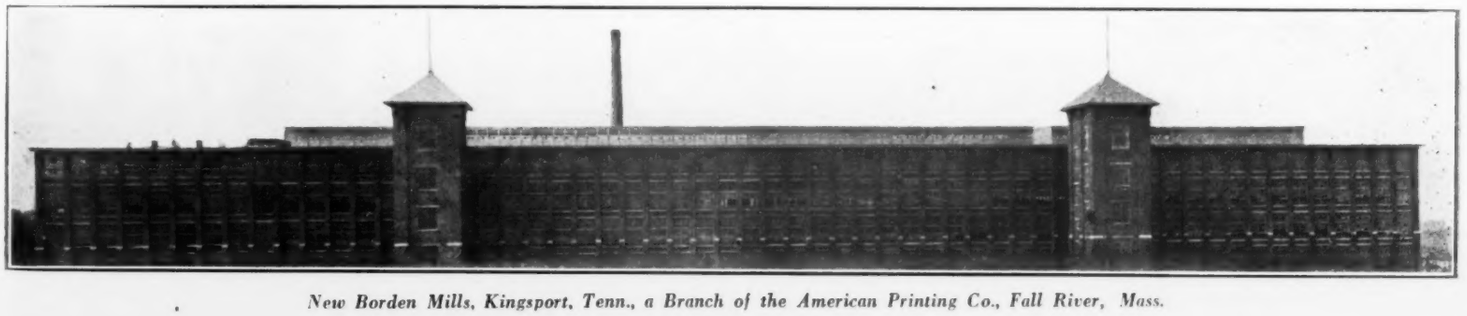
Silk Industry

Progress in the silk industry exceeded that made during the last four years. Of the 38 new silk mills started, 34 were located in the North, three in the South and one in the West. In Paterson alone, 12 such plants were established, and all but one

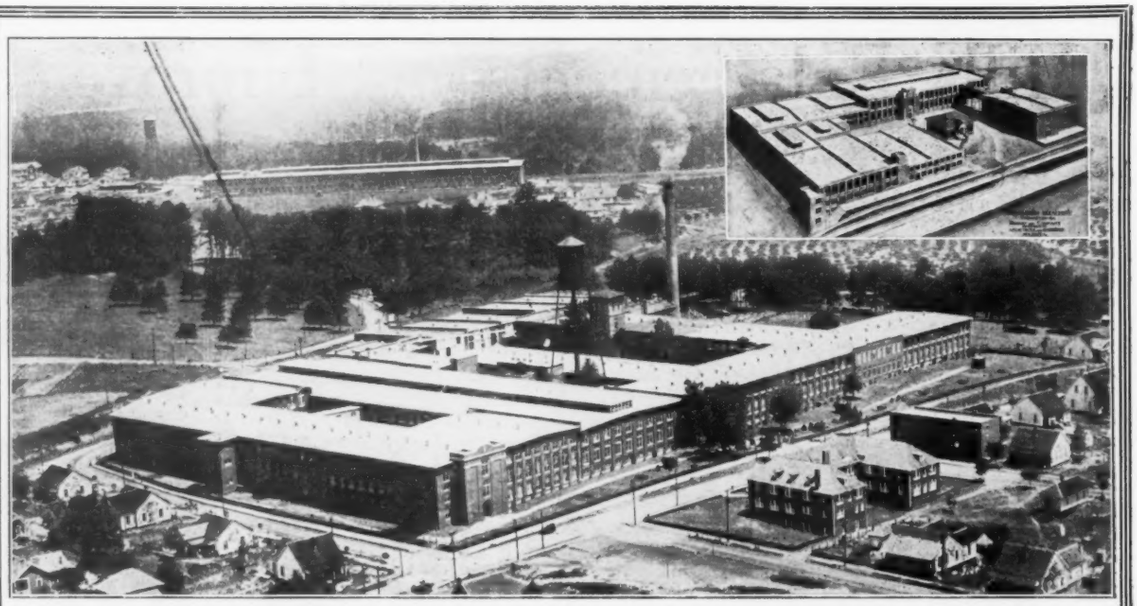
(*Continued on page* 463)

COMPARISON OF NEW MILL CONSTRUCTION OF LAST 12 YEARS

	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914
Cotton	40	39	74	57	46	89	74	29	52	51	24	26
Wool	17	15	38	34	36	30	54	24	24	23	19	21
Knitting	84	57	73	94	103	59	84	120	97	113	111	110
Silk	38	22	26	24	31	71	61	49	86	60	25	51
Rayon	11	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous	49	53	21	29	26	15	16	27	38	33	40	37
	239	186	232	238	242	264	289	254	297	280	219	245



New Borden Mills, Kingsport, Tenn., a Branch of the American Printing Co., Fall River, Mass.



THE THOMASTON MILLS

A Typical Southern Development

THE rapid growth of the Southern Textile industry is well exemplified in the history of the Thomaston Cotton Mills at Thomaston, Georgia.

From its beginning, in 1900, with a mill of 5,000 spindles, this enterprise has had a most phenomenal growth. With the original mill as a nucleus, spindles have been added, as the demand for its product increased, until today the Thomaston plant consists of three separate Mills of 25,000 spindles each. In 1919 the new Peerless Mill of 30,000 spindles was built and this together with the Aldora Mills, which was acquired provides the Thomaston Mills with 121,000 spindles.

Culminating this unusual growth is the new Thomaston Bleachery, just completed, which has a capacity of 1,000,000 yards per week.

This organization of engineers is retained by the Thomaston Mills to handle their construction, equipment and production problems.

ROBERT & COMPANY, *Inc.*

Architects and Engineers

Atlanta Georgia

New Borden Mills Unit in Operation

Interesting Details of Construction, Equipment, Machinery Arrangement, and Power Supply of American Printing Company Subsidiary at Kingsport, Tennessee—Mill Village of One Hundred Houses Now Under Construction—Equipment Includes 88,648 Spindles and 1,958 Looms

By Miles Sampson

THE new plant of the Borden Mills, Inc., at Kingsport, Tenn., commenced late in 1924, is now well into production. Only a few final details remain to be completed before the development can be considered a finished unit, needing only the gradually increasing experience of its new operatives in tuning-up to capacity production. The project is a noteworthy one in many ways. First, it represents the initial movement to the South, for purposes of trial and experiment, of machinery from two of the seven mills of the parent company, The American Printing Co., at Fall River, Mass. This, of itself, would focus the attention of northern mill men on the installation and operation of the plant and the measure of success it attains.

Second, it is on a scale much larger than that now general in the South, 88,648 spindles and 1,958 forty-inch automatic looms being housed under one roof, with their necessary preparatory machinery. A unit of such size is believed by some competent judges to be larger than it is economical to operate. Then, too, the methods of construction have been somewhat unique. The preparation of the design, and the specification and purchase of materials have been performed entirely by the engineering department of the parent company under the direction of the plant engineer, George P. Gilmore.

This southern mill project of the Borden interests is noteworthy in size, in method of design and construction, and in certain equipment features. Important construction facts and figures are summarized from the preliminary description appearing in the annual review number of Feb. 7, 1925. Plumbing, heating, sprinkler, and private water supply systems which have been installed are now fully described. The process flow sheet and card room machinery plan are given, noting certain descriptive mechanical features. Methods of electric driving employed, and the reasons for the adoption of particular types are discussed. There is also a description of the mill village now under construction.

Fig. 1. Main Building of Borden Mills, Inc.

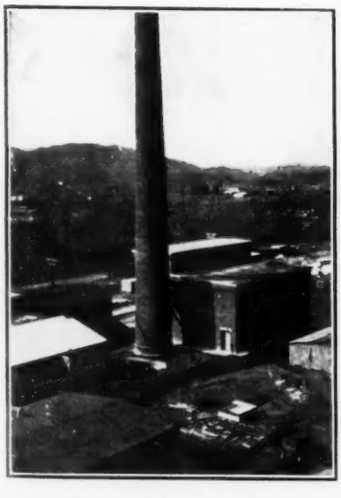


Fig. 3. Boiler House

Further, the actual work of construction was performed without the employment of any general contractor. Under the same supervision, and with W. L. Holyoke as superintendent of construction, competent local foremen were secured for the various branches of the work. These men secured locally, and in the surrounding counties, the necessary construction force, numbering as many as four hundred men. This method has produced not only eminently satisfactory workmanship but creditable speed in its execution. Clearing of the site, which was heavily forested, commenced on Aug. 4, 1924. Mill excavation started on Sept. 8, 1924, and the cornerstone was laid Oct. 11, with appropriate ceremonies.

On Mar. 10, the first carload of machinery arrived and erection was promptly started. On May 26, eight and one-half months after excavation was started, the first cotton was put through the machinery. Partial operation of all departments was accomplished somewhat later, evidenced by the first carload of cloth, which left Kingsport on Sept. 15, 1925, to be bleached, printed and finished at Fall River. Thus a period of only twelve and one-quarter months separates the starting of excavation and the attainment of quantity production. Finally, certain features of construction, machinery arrangement, power transmission, etc., are somewhat out of the ordinary, and may be worth description.

Mill Building Features

Fig. 1 gives an excellent idea of the general appearance of the front of the mill building, and shows the two main external stair towers. It is of standard mill construction, 653 ft. 8 in. by 146 ft., brick walled, with plank floors on steel I-beam girders, 11 ft. on centers. Large steel sash 8 ft. 6 in. wide, are set between heavy pilasters, 2 ft. 6 in. wide, and in conjunction with floor heights of 16 ft. 6 in. to 18 ft. provide ample daylight illumination. This is still further enhanced by a 30 ft. monitor on the top floor.

The picker room section, at the left end of Fig. 1, occupies eight bays and is of reinforced concrete floor construction. All top floors, except in the picker room proper, are of maple. All brick and cement used were Kingsport products, and the main lumber contract of over 2,000,000 ft. was awarded locally, in competition with many outside concerns.

Subsidiary Buildings

Fig. 2 shows a view of the cotton storehouse, 99 ft. 4 in. by 106 ft. 8 in., which also accommodates the cotton opening machinery on the lower floor. This is of thoroughly fireproof construction, with brick walls, precast concrete trim, reinforced concrete floors and roof. Story heights here are 8 ft. 3 in., giving a maximum capacity of 6,000 bales of cotton on end. It is electric lighted, heated, and sprinklered, and is served by a three-ton elevator, dial scales, etc. Its loading platform will serve both the incoming cotton and the outgoing baled cloth. Fig. 7 shows the location of this and other small buildings in respect to the main mill.

Fig. 3 gives a view of the boiler house and chimney. Through the purchase of power, steam requirements have been reduced to heating and slashing loads, and the boiler house is, accordingly, very small. It has a possible capacity of four boilers and their auxiliaries, but only two are now installed. Slack coal, mined in the mountains nearby, will be burned. Both coal and ash will be handled by a Brownhoist gasoline-driven caterpillar crane, bought for and used extensively in construction work. The chimney is of radial brick construction, 175 ft. high, with a 6 ft. flue. It was constructed by Ballard Sprague & Co., from brick made by the Kings-

Fig. 4. Garage

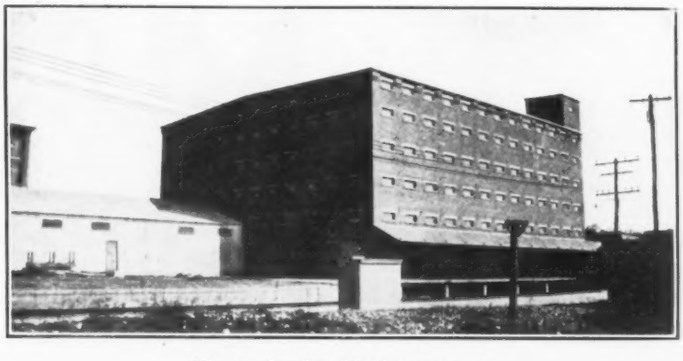
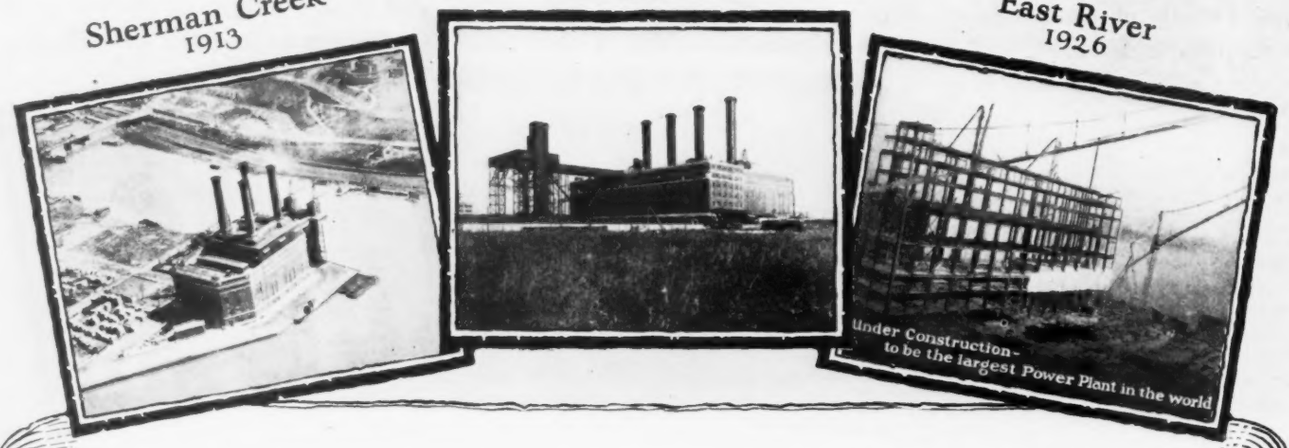


Fig. 2. Borden Mills' Storehouse

Sherman Creek
1913

Hell Gate
1921

East River
1926



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What factor affects the cost to the greatest extent?

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(Including the largest plants in the world)

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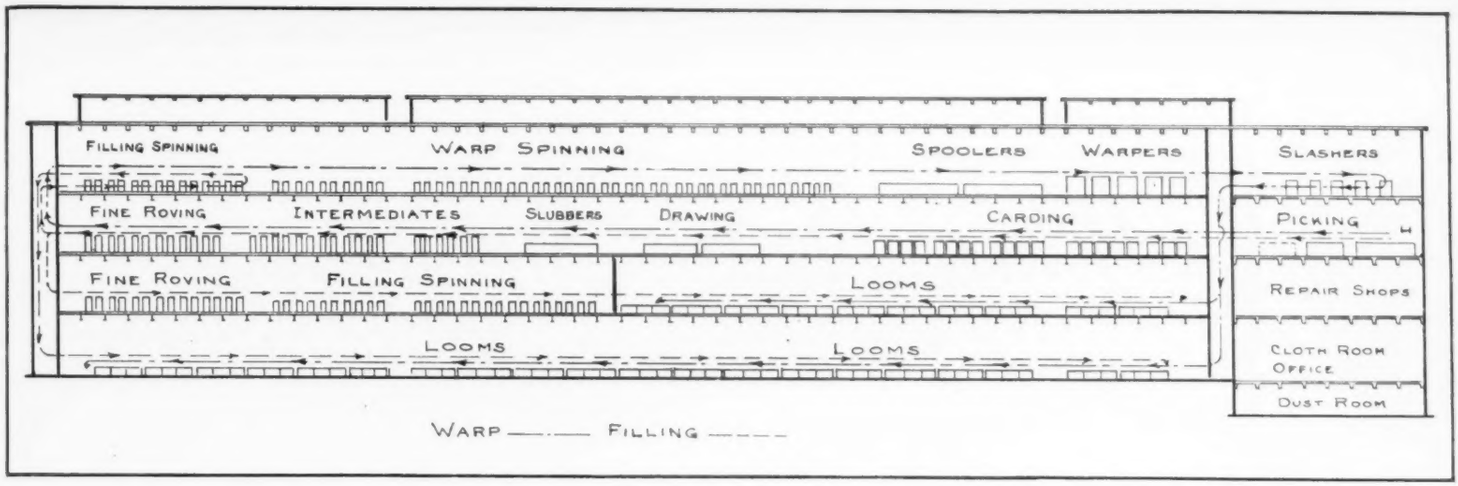

Fig. 6. Process Flow Sheet

port Brick Corp., who furnished all the regular brick used on the job.

Fig. 4 shows the garage, 38 ft. 4 in. by 64 ft., with ample accommodations for all trucking equipment. It also houses the battery charging equipment for the industrial trucks used about the plant. It is of fireproof construction. The other small buildings, not shown, are of the same permanent substantial type.

Plumbing and Sprinklers

The mill equipment is of the best. The plumbing is installed in three toilet towers on the rear of the mill, each tower being subdivided vertically for men's and women's rooms. Vitreous china closets with enamelled iron high tanks, vitreous china urinals, enameled iron sinks, slate partitions and mastic floors combine to make plain yet sanitary and serviceable toilet rooms. Fig. 5 shows a drawing of a typical pair of rooms. An Audiffren system for cooling drinking water has been installed with outlets at each toilet tower in the form of sanitary bubblers.

Heating surfaces are of the pipe coil type, 12 miles of 1¼ in. pipe be-

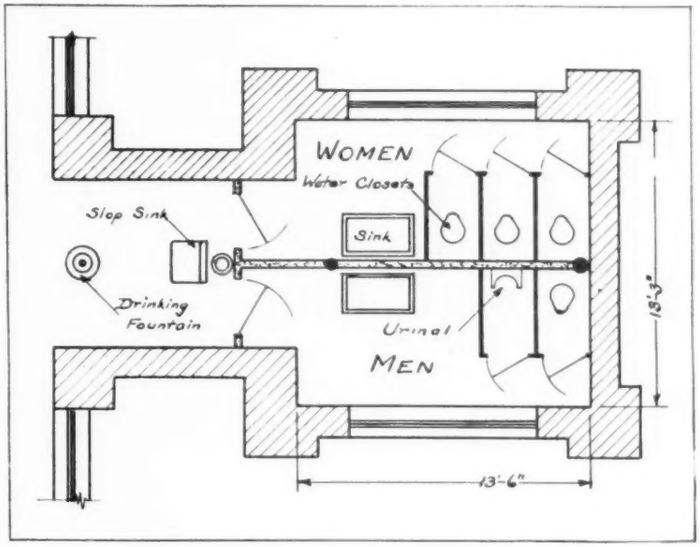

Fig. 5. Typical Toilet Rooms

ing required for the job. Coils are hung approximately 10 ft. from the floor in accordance with modern practice. They are supplied with steam at low pressure from the main process steam line, through a reducing valve and all drips are returned to the boiler room by a vacuum pump. Supply and return lines for the mill are run underground through Ric-Wil split tile pipe, while overhead lines through the semi-permanent storehouse take care of the main storehouse heating. Locations are shown in Fig. 7.

The mill and storehouse are completely sprinklered in accordance with Factory Mutual requirements. The smaller buildings, being entirely of incombustible material, and with few combustible contents, are unsprinklered. The installation was made by the construction force, from pipe and fittings bought cut to length and straightened in, ready for erection. Standpipes with 2½ in. hose are supplied in each tower, and auxiliary hose in each room.

Lighting Features

The lighting, it is believed, is fully abreast of modern thought, if not somewhat in advance. All wiring is in conduit, and dead front safety panel boxes control the circuits. Standard RLM hooded Reflectors, with bowl enamelled lamps are hung on suspension loops and springs to absorb all vibration. Intensities are high. In the weaving department 400 watt lamps on a 16 by 16 ft. spacing, with a 14 ft. mounting height, give an intensity of 12 ft. candles on the working plane. In other rooms 200 and 300 watt lamps are used, giving intensities down to 4 ft. candles.

A complete system of "special lighting" circuits will provide a dim light in all work rooms, and adequate illumination for stairways after the main lighting circuits are turned off. Plug receptacles for 110 volt single phase current are also freely provided, spaced not to exceed 50 ft. apart, to give light or power for maintenance or repair work.

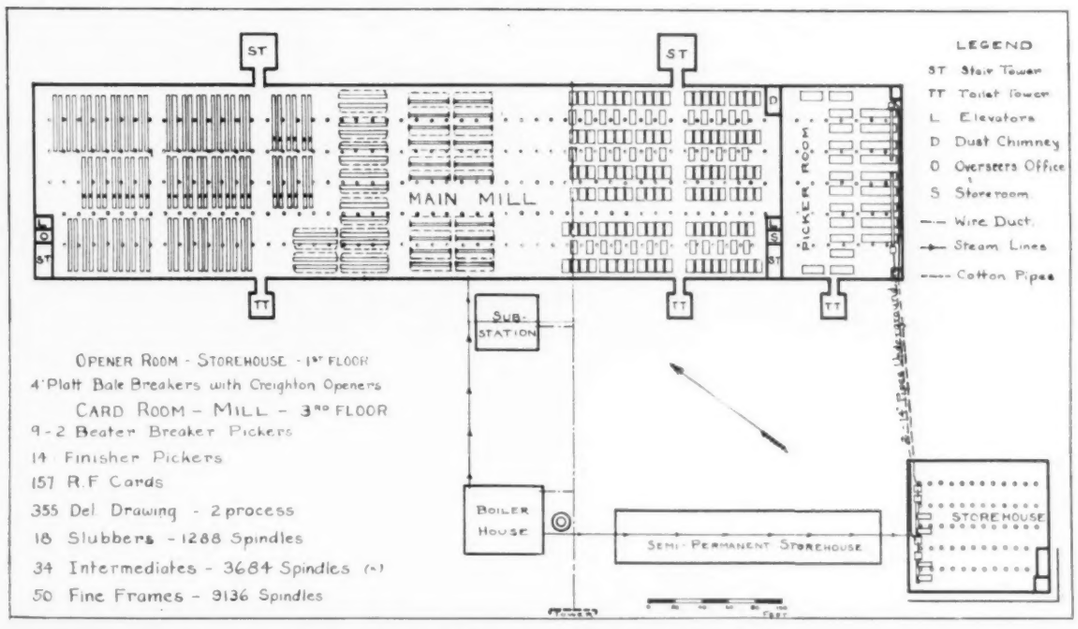

Fig. 7. Location Plan and Card Room Machinery Layout

Land Improvements Extensive

Outside the actual group of mill

Where Do You Stand?

What place in the big Textile Picture have you occupied in the past, what now, and most important of all, what can you expect from the future?

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(a) Established earning power past and prospective.

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1 — Selling organization, customers and market.

2 — Personnel and ability of management.

3 — Costs and quality of products.

4 — Competitors.

5 — Labor and raw material.

6 — Effect of location on your prospective stability in the industry.

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buildings the land improvements have been extensive. In order to provide for all possible future needs a 36 in. private trunk sewer has been run to the Holston river, some 3300 ft. away. This will also carry the storm water through a careful scheme of yard grading and some 14 catch basins.

In addition, over 14,000 yds. of concrete roadway, 18 ft. wide and upward, has been laid around the mill yard and its approaches to insure easy transportation under all weather conditions. The mill site, which lies along the right of way of the Clinchfield Railroad main line, has been provided with a 2,000 ft. sidetrack to serve the storehouse loading platform and mill yard levels. An adequate system of yard lighting, with buried wiring, ornamental iron poles, brackets and globes, beautifies the grounds and provides necessary outside illumination.

Private Mill Water Supply

It was found advisable not to depend upon the city water system as a primary supply for sprinkler service and fire protection. This will be provided by a 100,000 gal. steel tank set upon the top of a hill about 7,000 ft. away, which gives adequate pressure upon the highest sprinklers. This tank will be kept full of Holston River water automatically, by three motor-driven pumps of some 3200 g.p.m. total capacity. These are located in a small pump house on the bank of the river nearby, built under considerable difficulty. A special power line from the mill site serves these pumps.

From this gravity tank a 16 in. pipe line has been run to the pipe gridiron around the mill yard which serves the sprinkler system. A separate connection is also made to the service water system, which will be supplied under the gravity tank head. The river water thus supplied will be treated with chlorine supplied under the Wallace and Tiernan system. The use of city water will thus be reduced to that necessary for drinking.

The secondary water supply for any fire requiring the use of fire streams, comes from a storage tank of 500,000 gal. capacity, and two 1500 g.p.m. Underwriter's centrifugal fire pumps, electrically driven. These are located at a safe distance, about 1200 ft. southeast of the mill. They will be manually started in time of emergency, and can be arranged to draw direct from the river water supply line in case an emergency bids fair to exhaust the storage tank supply.

Machinery Movement

Having thus briefly sketched, somewhat by way of repetition, the salient features of the building construction, equipment, and land improvements, let us consider the machinery. It must be continually borne in mind that the entire productive machinery of the plant was moved from Nos. 6 and 7 Mills of the parent company at Fall River. The former was a very old mill building, thoroughly reorganized and newly equipped in 1905. The latter was the spinning and weaving mill, built new in 1905, and extended in 1910, with automatic looms installed in 1914.

The actual dismantling, packing, loading and re-erection of the machinery was under the supervision of a few skilled fitters and workmen from the shops of the Whitin Machine Works and the Draper Corp.,

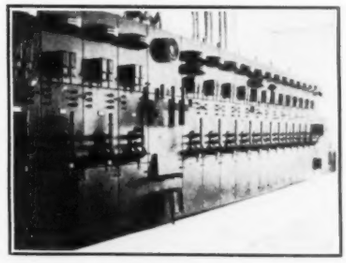

Fig. 8. Feeder Switchboard

working in conjunction with the company's engineering, mechanical, trucking and traffic departments. A force of skilled and unskilled workmen was recruited to assist in the work at each place, running as high as 165 men. It may be noted, in passing, that the total shipping weight was some 5,000 tons, requiring 360 railroad cars.

Machinery Arrangement

Fig. 6 shows, on a longitudinal section of the mill, a flow sheet indicating the general location of all machinery in its relation to the sequence of the processes. It will be noted that picking and carding occupy the

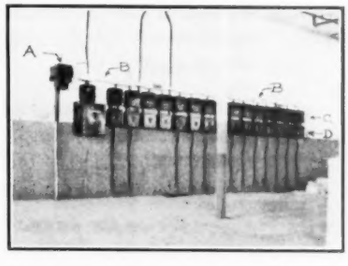

Fig. 9. Picker Room Motor Controls

entire third floor. Fig. 7 shows a scale drawing of the machinery arrangement of this room, and of the opener room in the storehouse, together with the location of various buildings, pipe lines, etc., previously mentioned. The machinery in these rooms is largely of Platt Bros. make. It will be seen that the openers and breakers are arranged in two units, with two cotton pipes, two distributors and two condensers, to facilitate the handling of varying warp and filling mixes if found advisable. It will be further noted that one process of picking has been eliminated and that the drawing is all two-processes. The empty space between the cards and drawing will allow the installation of additional cards if ever found desirable. All intermediate and fine roving frames (and all spinning frames as well) are set across the mill, two in each 11 ft. bay.

From the card room the fine roving for warp is elevated to the fourth floor, where it is spun, spooled, warped, slashed and tied-in. The following machinery is installed: 45,360 spindles Mason spinning 2 5/8 in. and 2¾ in. gauge; 3,200 spindles Easton & Burnham spoolers; 30 Entwistle warpers; 5 Livesey slashers; 2 Barber-Colman warp tying-in machines.

Filling yarn is spun on the second floor, requiring 43,288 spindles of Mason spinning. Weaving is taken care of by 1,958 Draper Northrup looms, 40 in. occupying the balance of the second floor and all of the first floor. In the cloth room are installed 6 trimmers, 2 Elliot & Hall yarding folders, and an Economy baling press. Here the cloth will be inspected, classed and prepared for shipment.

Roller covering will be done by the mill, and complete equipment for the purpose has been installed in a corner of the fourth floor.

Three overseers are employed: carding, spinning (including warp preparation), and weaving (including cloth room), the machinery being located in accordance with this, the usual New England practice.

Power Supply and Control

The power requirements of this installation will be from 3,000 to 3,500 kw. and will be supplied by the local central station of Kingsport Utilities, Inc., a subsidiary of the American Gas & Electric Co. A special pole line carrying two 3-phase circuits of 6,600 volt, 60 cycle alternating current, has been run from their station to the terminating tower located as shown on Fig. 6. This location at the property line was chosen from the point of view of safety, and the high tension circuits are run underground from this point to the substation.

These high tension circuits are controlled by a General Electric truck type switchboard of four panels. Three 1250 K. V. A. 13, 200/6,600, 575 volt Allis Chalmers transformers supply the power circuits, and three 200 K. V. A., 13,200/6,600, 110 volt units will furnish lighting current.

Power and lighting feeders are controlled by a 22 panel slate switchboard on pipe framework, a front view of which is shown at Fig. 8. Three 100 K. V. A., 13,200/6,600, 575 volt transformers are installed at the terminating tower. Switchboard connections are such that the 3,750 K. V. A. transformer bank can be thrown off the line, during week ends or nights, when this bank will carry the load. Heavy power losses, due to the exciting current of the main bank, are thus avoided. The switchboards, motors and motor controls were furnished by the General Electric Co. Motors, in general, are installed overhead on structural steel framework, except where picker motors are mounted on A-frames.

Fig. 9 shows the arrangement of the control equipment for one-half of the picker room motors, which has the advantages of simplicity of arrangement and ease of installation and maintenance. The power supply comes up in conduit at the left, to a T. P. S. T. oil circuit breaker (A) controlling the group. The feeder (BB) is tapped to supply current to 15 circuits through jack type disconnecting switches (CC), which can isolate individual motors and also allow easy instantaneous insertion of testing instruments. The magnetic switches are located directly below at (DD) and from them the circuits are carried to the floor and in the floor slab to the machine location.

All motors in the mill will be started and stopped by push button. Fig.

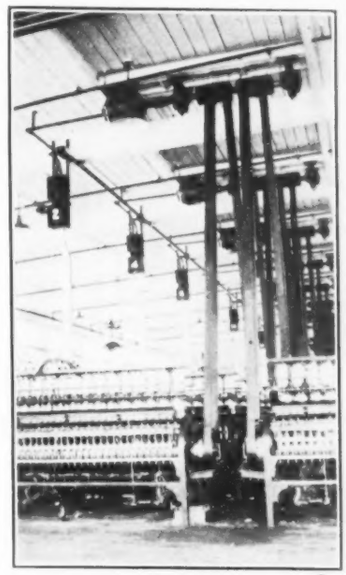

Fig. 10. Spinning Motor Controls

10 shows the arrangement of the four-frame spinning drives, and the wiring methods employed for the same type of control but under different conditions.

Methods of Driving

Individual motor drive in this mill is used principally in the picker room, where the machines were individually driven in their Fall River location, and where the advantages of such an arrangement are great and unmistakable. Two-frame and four-frame drive are employed to a much greater extent, to drive all slubbers, intermediates, fly frames and spinning frames.

Group drive is employed for the opening room, cards, drawing frames, spoolers, warpers, slashers and looms. The situation here was somewhat involved and presented several angles of approach. A large amount of shafting was available from the old location. It was, however, rather small, much of it being only 2 3/16 in. diameter. It was in lengths which would require cutting of every other piece to fit 11 ft. bays. The hangers were of the old babbitted type and prone to drip oil. Finally, the shafting should be erected in its new place before the

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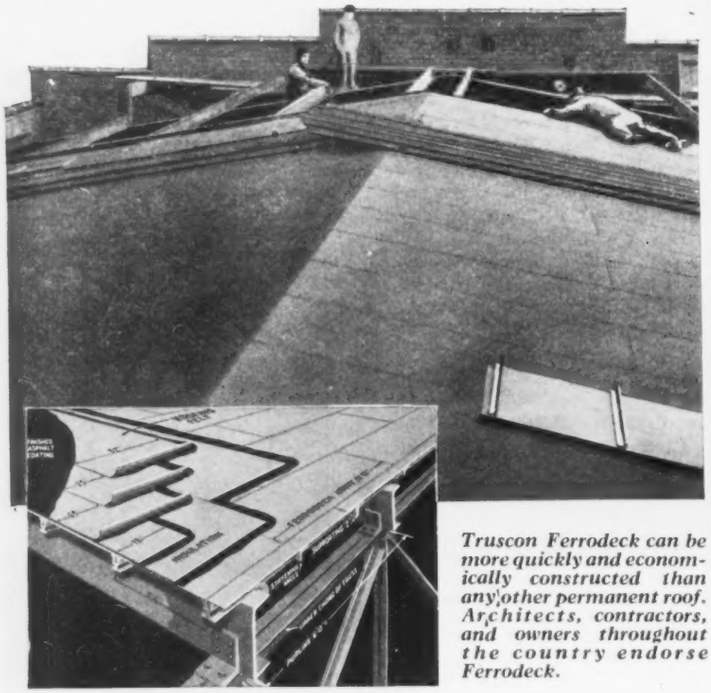

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machinery was received, or delay and waste would be caused.

It was therefore considered inadvisable to attempt to use this material, and the question resolved itself into new group drive vs. individual drive. A group drive, of Dodge Manufacturing Co. material and with Dodge-Timken roller bearings was installed. A considerable number of large wood rim pulleys was furnished by W. W. Carey Co. It is expected that this arrangement will result in a considerable gain in efficiency, a satisfactory power factor, a decreased maintenance cost, and the entire elimination of oil spots. Belting, where used, was taken from its old location, inspected, degreased where necessary, renovated, repaired and reapplied in its new location. Only a very small quantity had to be purchased new.

Other Items of Equipment

A few other important items of equipment remain to be described. Elevators made by the Salem Foundry & Machine Works, Inc., of Saline, Va., have been installed, two in the mill and one in the storehouse. These are of the direct electric traction type, with machines overhead, of 4,000 and 6,000 lb. capacity, and operate at 80 ft. per min. Cars are of ample size, with steel frame and guides and controlled by a car switch. Elevator doors were made by the Peelle Co.

Fig. 11. Employe Houses Under Construction

The humidifier equipment was installed complete by the Parks-Cramer Co., and consists of 199 of their Type HDD high pressure heads with 22 automatic controls. All processes are served from the cards to the warpers inclusive. The installation is based upon the maintenance in the various rooms of relative humidities of 55 to 75%, at a dry bulb temperature of 90 deg. F. Cards are stripped by means of the Firth dustless system, as sold by Firth-Smith Co., Boston, Mass. A Chicago watchman's clock system, an International synchronized electric time clock system, and a PAX automatic telephone exchange with Auto-call, have also been installed.

Village Under Construction

The problem of adequate comfortable housing at reasonable cost has been met in a broad way. Adjacent to the mill site, and to a public park, "The Oaks," a large tract of land has been acquired and subdivided into house lots. On this land is now being erected at least 100 houses of 4, 5 and 6 rooms, with bath, of bungalow type, in frame construction. A view of part of the houses on one street as they appeared on Nov. 20, is given in Fig. 11. Each house will be provided with a screened-in front porch, a back porch and summer kitchen, bathroom, running water and electric lights. Each will be rented at a low figure, only to employes.

Citizens Supply Co. of Kingsport are supplying the main materials contract, and Summers Hardware Co. of Johnson City, the sewer pipe, soil pipe, fittings, etc. John L. Mott Iron Works are furnishing the plumbing fixtures, and E. I. DuPont de Nemours the entire schedule of paint.

The village has been planned with much care to secure comfortable accommodations at a reasonable cost, yet to avoid monotony by simple variations in design and in paint color combinations. A complete system of sewerage will tie into the city's and company's existing sewer lines. Extensions of the city water system will provide fire protection and house service. Lighting service will be provided from pole lines running along the back lines of the lots. Streets, 40 ft. wide, carefully graded, with walks, trees and driveways are planned.

The direct representatives of the parent company in the operation of the mill are George H. Hughes, superintendent; Calvin Holmes, assistant superintendent; Ernest C. Cross, cashier. The overseers are R. F. Dellinger, carding; T. R. Morton, spinning; W. S. Porter, weaving.

The product, after undergoing the finishing processes at Fall River, will be marketed with other "Borden Fabrics" by M. C. D. Borden & Sons, Inc.

Woolen Yarn Mill for Jefferson Mfg. Co.

Program of Improvement and Modernization Extended During 1925 by Erection of New Picking, Carding and Spinning Mill at Jefferson, Mass., to Accommodate Larger and Newer Machinery—Description of New Boiler Plant for Variable Load

THE Jefferson Mfg. Co., Jefferson, Mass., was established in 1860 and is engaged in the production of cloakings and overcoatings. From the early date of its establishment, and from the fact that until quite recently few improvements had been made, it is apparent that the concern was badly in need of new buildings to house its machinery and operatives and to accommodate larger and more modern machinery. Also, the consolidation of the present plant with another plant of the firm, disorganized the present plant so that there was a deficiency of spinning machinery.

Supplements Former Expansion

Having recently built a new dyehouse and a new boiler plant, it was decided in the early part of 1925 to proceed with the construction of a new mill in which should be installed the machinery for the processes of picking, carding and spinning for a fifteen card set mill. Cole & Kimball Boston, were the engineers for these various enlargements. The new mill is 207 ft. long, 84 ft. wide, and two stories high, with a basement story extending the length of the mill and two-thirds of the width. This width of basement was primarily due to the site of the mill being the side of a hill. However, advantage was taken of this by making the basement story available for the picking department.

Mill Type Construction

The building is of mill type construction, 12 ft. center to center of bays, brick walls, steel floor and roof beams, Lally columns, wood roof covered with tar and gravel roofing. The basement floor is of granolithic concrete on solid earth, treated with Swan treatment. The first floor is reinforced concrete with wood top, and the second floor is of wood. All window sashes are of galvanized steel and bronze fitted. Door sills are of granite; window sills and other trimmings are of artificial stone. The height of stories of the mill are as follows: basement 15 ft. 6 in., first story 14 ft., second story 14 ft. The stair tower is of fireproof construction, consisting of concrete floors, landing and roof; pressed steel stair stringers, risers and treads (concrete filled).

The basement story of the mill is entirely fireproof and contains the rag pickers, gauze rooms, mixing pickers and storage of wool in process. Wool from the storehouse and dyehouse will be conveyed to and distributed in this story of the mill by means of an electrically operated trolley system. The wool from the mixing pickers in the basement story is blown to the wool bins in the second story of the mill where the cards are located. These bins are 12 ft. by 12 ft. and extend the entire length of one side of the mill.

The cards are placed directly in front of the wool bins and are set transversely across the mill. The spools from the cards pass to the floor below, or first story of the mill, occupied by the mule spinning and warp spooling machinery. From the spinning room the yarn passes across a bridge to the dressing and weaving rooms in another mill.

Gauze Room

Considerable study was given to the gauze room in the basement story receiving the discharge from the rag pickers. This process produces more or less smoke, dust and odor, which it is desirable to keep from entering the working portion of the mill. This gauze room is enclosed in brick and is 10 ft. wide, 13 ft. high, and 66 ft. long, and is planned to receive the discharge from eight rag pickers. It is divided at one end by a movable partition so that the discharge from two rag pickers can be kept separated from the remaining six rag pickers if desired.

Extending horizontally along the ceiling of this gauze room is a 2½ by 7 ft. galvanized iron duct, with five 3 by 3 ft. adjustable shuttered openings. These openings are protected by wire mesh screens. The galvanized iron duct terminates in a 5 by 9 ft. brick flue extending above the roof of the mill. Draft is provided by means of a small fan and heater to induce a current in this exhause flue, and produce a slight vacuum in the gauze room chamber.

Boiler Plant

The boiler plant was built previous to the building of the mill and may be of some interest to parties contemplating building a small, compact boiler plant. The house joins the side of the mill at one end and is 37 by 47 ft. On account of the limited yard room available for the boiler plant, a water tube type of boiler was used. The house is planned for two 4,000 sq. ft. heating surface boilers.

The mill was formerly served by two hand-fired horizontal tubular boilers, each containing 1500 sq. ft. of heating surface. Extreme difficulty was experienced in supplying necessary steam for the plant and the steam pressure could not be maintained. Nowadays it is difficult to obtain firemen who will work under such conditions. It was therefore considered good policy to install in the new plant mechanically operated equipment insofar as practical. The new boiler is

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Established 1854
NEWNAN, GA.

a Babcock & Wilcox cross drum type unit fitted with Jones "lateral retort" stoker, as made by the Sanford Riley Stoker Co., and is four retorts deep, requiring a furnace 9 ft. wide by 6 ft. long. Forced draft is furnished by a Green steel plate fan, engine-driven. The chimney for the plant is 6 ft. 6 in. internal diameter at the top, and 150 ft. high. Draft apparatus, stoker speed and boiler feed water equipment are automatically controlled.

Coal for the plant is delivered on the boiler room floor, forward the front line of the boiler, by motor truck. The coal receiving hopper of the stoker being too high for the fireman to conveniently shovel the coal from the floor, an electrically operated traveling bucket is provided into which the coal is shovelled from the floor. Throwing a switch elevates the bucket to the height required by the stoker hopper. It is then pushed to a position over the hopper. Pulling a handle releases a latch, whence the bucket discharges into the hopper and returns to position.

The boiler has a very variable load and operates generally from 100% to 150% rating. For short periods it has carried 250% rating. The fireman has no difficulty in handling the equipment easily and economically. The boiler plant has been in operation about eighteen months and not a cent has been spent for repairs or parts during that period. A recent examination of the furnace and stoker parts showed them to be in perfect condition. The former boilers have been held in reserve in case the new boiler had to be shut down for any cause; this has never occurred since the start.

New Wool Carding and Spinning Mill of Jefferson Mfg. Co., Jefferson, Mass.

The Fiske-Carter Construction Co., Worcester, Mass., were the general contractors, all work being done without interfering with the operation of the plant. Cole & Kimball, Boston, were the engineers.

Pepperell Mfg. Co., Opelika, Ala.

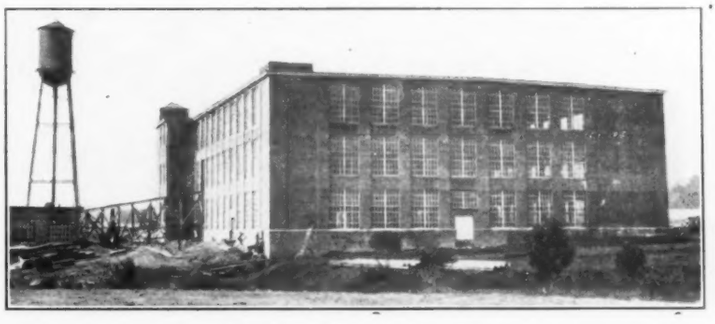
New Southern Plant Established by Northern Mill—Machinery Moved from Parent Plant at Biddeford, Maine—Main Building Is Three Stories, 138 by 340 Ft., Designed for Future Expansion—Modern Village Development Carried Out

ONE of the important developments of the year 1925 in new mill construction is the plant erected at Opelika, Ala. by the Pepperell Mfg. Co., of Biddeford, Me. The mill is 138 by 340 ft. three stories high, and will house about 24,000 spindles and 628 looms. Subsidiary buildings include a cotton warehouse and opener room, a boiler, switch and pump house, mill garage, and a village with its water supply, sewage plant and electric lights. The work was started in April and is practically complete. Machinery is being installed with the expectation that production will start about February 1.

The site of the new mill is about a mile and one-half west of the city of Opelika, Ala., at an elevation of 780 ft. above sea level. It is situated on the main lines of the Western of Alabama and the Central of Georgia railroads, and consists of about 400 acres of gentle rolling farm land bounded on two sides by the above railroads and on the third side by Frazer Creek.

Designed for Expansion

The first story of the mill building is 138 by 340 ft., and is devoted mainly to weaving. The second and third stories of the mill are 138 by 268 ft., and are used for spinning and card rooms, respectively. The west wall of this building is a temporary wood end to allow for future expansion. The general design embodies two main interior stair towers, one enclosed in brick walls and one (a temporary one) at the temporary end in wooden walls, with one exterior combined toilet and elevator tower. The picker room is on the top floor separated from the remainder of the floor by a fireproof partition. The first floor contains, in addition to the weave room, the main office, the cloth room and the machine shop, all separated from each other by glazed wooden partitions.



New Southern Plant of Pepperell Mfg. Co.

The bays have been made 12 ft. each, and the spans 26 or 27 ft. each, to properly accommodate the machinery, most of which is old machinery that has been in use in Biddeford, Me. The story heights are 16 ft., thus allowing for ample illumination through the windows, which are Bayley steel sash with four ventilating sections per opening, all glazed with plain double thick glass.

The mill is of modified mill construction using steel beams, wooden columns resting directly on the ones below without the use of pintles, plank floors with intermediate flooring laid diagonally and finished with 1¼ in. Western maple, plank roofs finished with Barrett bonded roofing. The first floor is laid directly on the ground and consists of 4 in. of Tar-Rok flooring, 3 in. creosoted hard pine plank, and maple top surface.

The warehouse is 100 by 200 ft., and contains three standard cotton storehouses, waste house, and opener room with concrete floors and handling platforms connecting directly with the freight siding. The boiler room, switch house and pump house are all contained in a building 38 by 50 feet., provision being made for future extension, as in the main mill. The boiler will be used for heating and slashing purposes only, as all power will be purchased from the Alabama Power Co., who have installed a sub-station to transform the power from 44,000 volts to 600 volts.

Fire Protection

The mill, warehouse, etc., are equipped with an approved automatic sprinkler system, the total installation being about 1560 heads. The primary supply is the city water system, with a 100,000 gal. steel elevated tank for secondary supply, and with a third supply consisting of a 1,000,000 gal. concrete reservoir serving as a suction supply for a 1500 G. P. M. fire pump, motor driven. An approved layout of hydrants and hose houses will assist in fire fighting from the outside. Inside standpipes are provided in stair towers, and small hose and play pipes in all rooms.

All of the machinery, with the exception of the breaker pickers, is machinery that has been in operation at the parent plant in Biddeford, Me., and has been dismantled, packed and

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Progressive management has found that its interest in the workman extends beyond the factory; it goes into the home. Good industrial housing is not a philanthropic movement nor welfare work, but it is a sound, safe business proposition. The workman who has a comfortable home to go to is a satisfied employee. The housewife and the children in such a home are happy and contented to reside in your locality.

When you are ready to consider the housing problem of your employees, bear these facts in mind:

4 ROOMS — 4 FLOOR PLANS

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—expedites your building project—
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OUR services embrace the design, equipment and supervision of erection of all kinds of industrial structures as well as making financial reports, including appraisals, valuations, accounting data and business opportunities.

Village of Pepperell Manufacturing Co. at Opelika, Ala.

shipped to Opelika and erected in the new plant. The opening machinery is located in a room in the warehouse, and the cotton will be carried by conveyor pipes to the picker room on the third floor and delivered directly to the breaker pickers by a condenser and Morton distributor. The cards, drawing slubbers and roving frames are also on the third floor. All of the spinning, the spoolers, warpers and slashers are on the second floor, and the looms are on the ground floor. All of the machinery will be electrically driven, the pickers by individual motors, the carding and weaving machinery by group drive, and the spinning frames by four-frame motors.

Village Development

The present village development consists of 100 houses, 92 of which are four-room, and 8 are six-room single family houses. The houses are wired for electric lights, equipped with lighting fixtures, base plugs and switches, and supplied with city water in kitchen sinks, lavatories and toilets, while the houses for overseers and second-hands are supplied with baths, and all houses have the plumbing roughed in for the future addition of baths. There is also an 8-room agent's house, with double garage, a gasoline filling station on the Opelika-Auburn State Highway which crosses the central portion of the property, and a hose and reel house for fire protection. The village is also protected with a hydrant system on the city water pressure, and as a reserve has a 50,000 gal. steel tank on an elevated tower. There is also a separate village for negro laborers, consisting of 7 three-room houses.

A complete sewage disposal system has been included. Each house in the village, and the mill buildings, are connected to a system of underground sewer pipes which deliver the sewage by gravity to a disposal plant adjacent to Frazer Creek. This disposal plant consists of an Imhoff tank with two filter beds and two sludge beds. The Imhoff tank is entirely below grade and covered with a house thoroughly screened against mosquitoes, and all arranged according to the most sanitary and up-to-date practices.

There are more than two miles of 40-ft. streets in the present development. The street lighting system and the wiring to houses is by means of combined underground and overhead conductors, so arranged as to keep wiring off the streets. It is planned to plant water oaks on both sides of all streets, and to plant privet hedges around and between each house, not only to beautify the village but also from the strictly utilitarian standpoint of comfort and health during the summer months. In this connection, the management plan to provide standard cow-stalls for the employes' stock adjacent to a community pasture, and to insist that all individual garages or other outbuildings an employe may wish to have, must meet the approval of the management and must be of standard construction.

The entire village and plant is laid out so that the present arrangements will fit into a much more pretentious possible future layout should the experience of the company at Opelika warrant such action.

F. P. Sheldon & Son, engineers and architects, Providence, R. I. are responsible for the design, equipment and supervision of erection of the mill, machinery and mill village, including village houses, street system, water supply, sewage disposal and electrification. Augustus N. Rantoul, architect, Boston, Mass., designed the agent's house and the various landscape effects, such as hedges, tree planting, etc. Batson-Cook Co. of West Point, Ga., are the general contractors for the construction work, including buildings, reservoir, street grading and surfacing and sewage disposal plant.

The panorama shows practically the entire village as now built, and the photograph of the mill shows the east and south elevation with the opener room at the left.

Southern Plant for Powell Co.

Building Remodeled for Manufacturing and Hosiery Machinery Installed—Mill Village Constructed

By Charles F. McGrath
Resident Engineer

THE officials of the Powell Knitting Co., Philadelphia, in looking over the southern territory with a view to extending their manufacturing facilities, decided after a careful study of numerous locations that Spartanburg, S. C., offered a favorable location for their plant extension. The Model Mill, a part of the Textile Industrial Institute, was purchased together with 25 acres of land surrounding it. This building, built in 1919, is of reinforced concrete, two stories high, and contains approximately 21,000 sq. ft. of floor space.

Mill Village

In July, 1925, Lockwood, Greene & Co., engineers, made a complete topographical survey of the property and planned a village containing 25 new houses, making provision for a future extension of approximately three times this size. Fiske-Carter Construction Co. was awarded the contract to build 20 four-room houses, 4 five-room houses, and one double three-room house, and to remodel and repair the three houses then on the property. The new houses are of the best type of frame construction, plastered inside and contain full plumbing of laundry tray and sink, bath tub, lavatory, water closet and hot water tank. The water closets are equipped with Sloan flush valves. Walton Engineering Co., Rock Hill, has the contract for the plumbing. The house and street lighting is being installed by Huntington & Guerry, of Spartanburg. Each house has suitable lighting fixtures in each room.

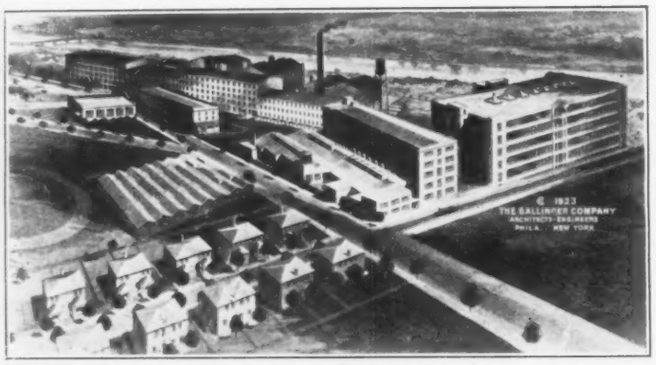
Section of New Village of Powell Knitting Co. at Spartanburg, S. C.

Extensive grading prepared the existing roads. New streets for sewers, curb and sidewalks, gutters and water mains are now being installed by Fiske-Carter Construction Co. On the completion of the work the streets are to be top-soiled. The work on this village is approximately 85% completed and on completion it will be one of the most modern, complete and prettiest villages in the South. Trees are to be planted along the streets and all banks grassed.

Mill Building Remodeled

The mill building has been remodeled by Fiske-Carter Construction Co., under supervision of Lockwood, Greene & Co., engineers. All of the old machinery, formerly used in the industrial training of the students of the Institute, was removed, partitions removed or rearranged to conform to requirements of the knitting machinery layout, additional toilet facilities added on both floors, press foundations built, piping rearranged and miscellaneous work necessary in adapting the plant to the new layout completed. The buildings, consisting of main mill, boiler house containing fire pump room, and warehouses, were repainted, the steam plant overhauled completely, tanks cleaned and painted and a general renovation of the entire plant made. The product of this mill will be men's half hose in tan and black colors with white heel and toe.

The machinery consists of the following: 191 120-needle flat frame knitting machines; 96 top loopers; 2 top cutters; 24 Wildman 120-needle ribbers; 1 steam press; 4 Paramount boarding tables; 2 rumblers. All of



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TEXTILE MANUFACTURERS

You will be interested in knowing that The Viscose Company has selected Parkersburg, West Virginia, as the location for one of their great manufacturing plants, making Rayon. The Contracts for the buildings and equipment have been let; the completed plant will be in operation by the end of the present year, giving employment to many thousand people. Parkersburg offers you intelligent, American born labor, natural gas and coal for fuel, electricity for power, shipping facilities by rail and water to the great distributing centers.

Parkersburg is at the gateway to the developing South and the great Central West. Manufacturers prosper here. You are invited to bring your business to Parkersburg and grow with this City.

PARKERSBURG
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the machinery with the exception of ribbers, press and boarding tables was designed and built by the Powell Knitting Co. The machinery designed by the owners embraces many unusual features and has been successfully operated by them for many years.

The machines will be arranged for group drive, except the press and exhaust fan for rumblers, which have individual motor drive. Six top looper tables, each having 16 loopers are arranged to drive from one shaft through bevel gears to the shaft under each table. The other machines are driven from a shaft arranged in floor hangers for group drive. Link Belt chains are used from motors to shafts in all drives.

All buildings are provided with automatic sprinkler equipment and general illumination. Heating is by wall radiation. While all the floor space available for manufacturing purposes is not to be utilized at present, it is the intention of the owners to completely fill the mill at some future date.

New Plant of National Yarn and Processing Co.

Latest Addition to Chattanooga's Mercerizing Industry Will Be in Operation by Sept. 1—To Have Potential Capacity of 200,000 Lbs. Weekly—Two Main Plant Buildings and Power Plant—Personnel Includes T. H. McKinney, Scott Probasco, Tom Moore and Nathaniel F. Ayer

ONE of the important new developments in the Chattanooga district, referred to in a previous general article on the textile growth of that section, is the construction of the plant of the newly organized National Yarn & Processing Co. at Rossville, Ga. This plant, which should be in operation by Sept. 1, will have a potential capacity of 200,000 lbs. of mercerized yarn per week and will thus represent an important increase in the mercerizing equipment of the Chattanooga district.

The personnel of the new company augurs well for its success. Thomas H. McKinney, formerly vice-president and general manager of the Dixie Mercerizing Co., Chattanooga, is president; Scott Probasco, vice-president of the American Trust & Savings Bank, Chattanooga, is vice-president; and Tom Moore, pioneer in the yarn business of Chattanooga, is secretary and treasurer. The directors include the officers and Nathaniel F. Ayer, treasurer of the Nyanza Mills, Woonsocket, R. I.

Construction Details

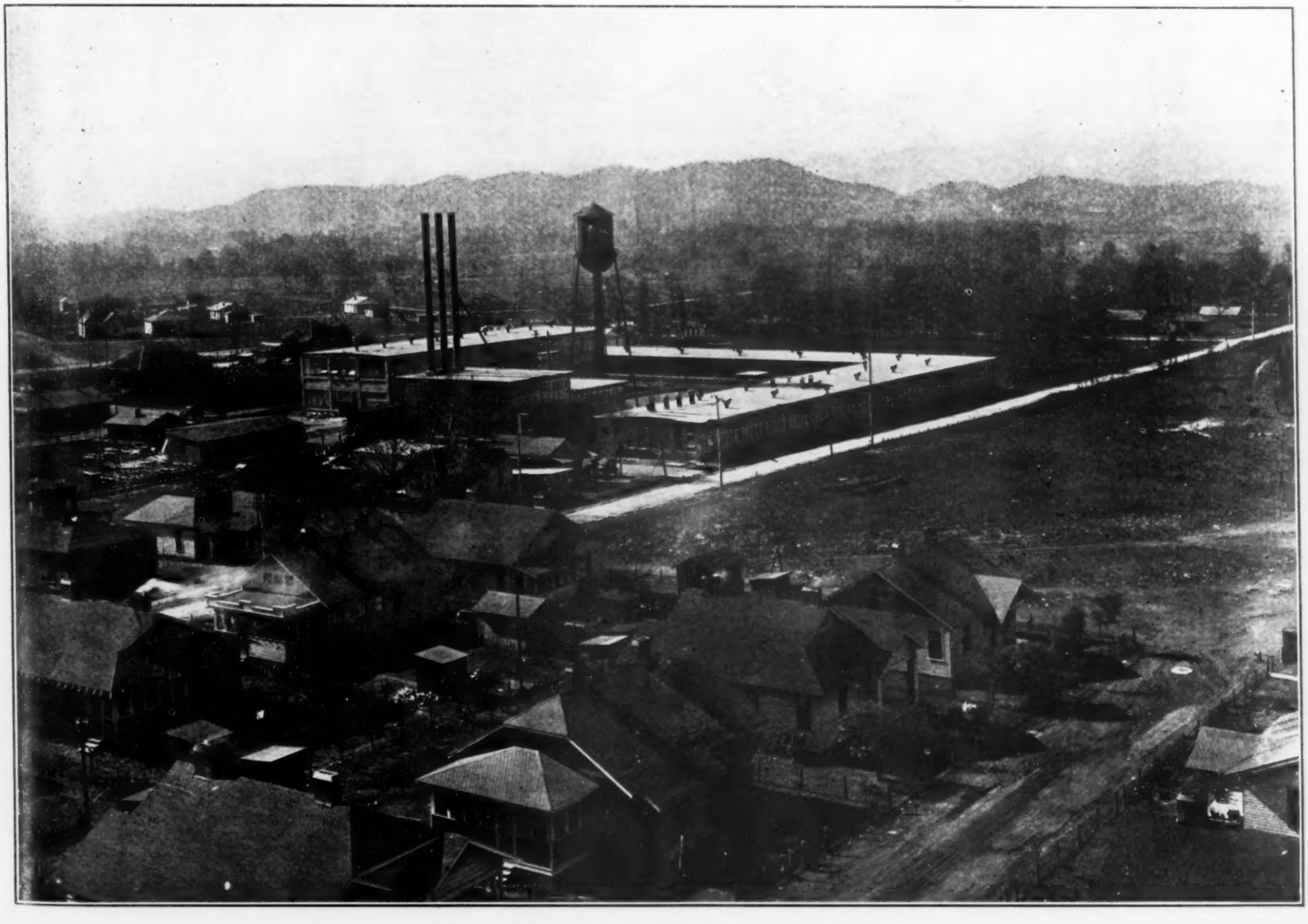
The site purchased by the company includes about ten acres of land on which there was a partly constructed two-story concrete building. This building is being completed and will be devoted to winding and inspection. It is 190 ft. long by 60 ft. wide, reinforced concrete, with concrete roof and daylight construction. The second of the main plant structures is a new L-shaped brick building, 50 ft. wide, and with a total length of 540 ft. This is of brick, concrete and steel; with monitor tar and gravel roof, and with the sides practically all steel sash and glass, assuring excellent lighting conditions. David Lupton's Sons Co. furnished the steel sash for the buildings.

It will be devoted to mercerizing, gassing, splitting and quilling. The operations are to be routed continuously, and as the far end of this one-story building extends up to the two-story finishing building, a conveying system will carry the yarn from the former to the second story of the latter, and in turn from the second to the first story of the finishing building at the other end.

In addition a separate structure, 60 ft. by 80 ft., of steel and concrete, is being built to house the power plant and the caustic recovery equipment.

Not only is excellent light assured in the plant buildings but good working conditions are provided by ventilators at the top with double ventilators at the sides. The floors will be of maple with sub-floors of creosoted pine.

The company was fortunate in



Plant of National Yarn & Processing Co., Rossville, Ga.

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Look into the great industrial plants throughout the country—anywhere and everywhere—and see the unnumbered acres of smooth, warm, clean, enduring Kreolite Wood Block Floors giving perfect service under extremes of wear, tear, abuse and punishment that no other floor could stand. They have permanently solved the flooring problems of Industrial America—they will solve yours.

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The exceptionally smooth surface, the high polish, the beautiful natural color and the ease with which they may be kept spotlessly clean, make Kreolite Redwood Block Floors particularly desirable for silk mills, cotton mills, and other textile industries.

Kreolite Redwood Blocks come from California's mammoth trees, are odorless, fire resistant and particularly immune to rot and wear.

You can fasten looms and other machinery directly to *Kreolite Redwood Block Floors* but nothing in the way of lint, waste or threads can be induced to stick to the handsome polished surface.

Have you a flooring problem? Have our Floor Engineers study it and give you a solution. Their services will not obligate you in the least.

Installation of Kreolite Floors does not interrupt production.

Kreolite Roofing Timbers resist acid solutions, extremes of humidity and temperature and prevent the spoilage of materials through condensation of moisture. Ask about them.

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WOOD BLOCK FLOORS

having purchased part of its equipment from the Nyanza Mills of Woonsocket, R. I., which is being removed to the Rossville plant. This includes two H. W. Butterworth & Sons Co. warp mercerizing machines, with an approximate capacity of 100,000 lbs. per week each; two Grinnell dryers; complete Ernest Scott & Co. caustic recovery equipment; and miscellaneous splitters, quillers, etc.

New equipment purchased by the company includes 30 Foster Machine Co. high-speed ball-bearing winders which insure twice the production per square foot of floor space possible from the old type. The company has also contracted for complete power plant equipment for its processing and heating, including three 200 h. p. Walsh & Weidner boilers.

The product of the company will range from 20s to 120s, gassed and mercerized, dyed and bleached.

Village Plans

Included in the real estate purchase of the company are ten houses which will be rented to employes. In addition the company plans to build 25 new houses with probable further increase in the future. Abundant labor supply is available in the vicinity of Rossville.

Power will be purchased from the Tennessee Electric Power Co. and all equipment will be individually driven.

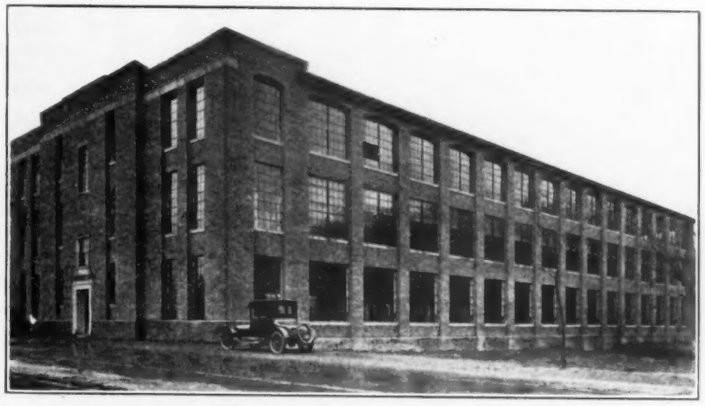
The Mark K. Wilson Co., of Chattanooga, has been awarded the general contract for the construction while Fred Cantrell Co., also of Chattanooga, has the contract for electrical, plumbing, heating, piping and sprinkler installations. The services of A. O. Berry, mechanical engineer of Chattanooga, have been retained in connection with the layout of the mechanical equipment of the plant.

Chattanooga regards this latest addition to its mercerizing industry as a particularly promising one. Mr. McKinney's experience in the mercerizing business, the sales training of Mr. Moore, the financial connection of Mr. Probasco, and the association with the Nyanza Mills through Mr. Ayer form a combination which is felt to be an exceedingly strong one.

Woolen and Finishing Mills Increase

Carding, Spinning and Finishing Building Erected for E. E. Hilliard Co., Buckland, Conn.—Wool Carding and Spinning Mill for Pontoosuc Woolen Mfg. Co., Pittsfield, Mass.—Additions for S. Slater & Sons, Webster, Mass., and Pawtuxet Valley Dyeing Co., Phenix, R. I.

MANY New England mills made enlargements and improvements during 1925, in some cases working out plans for betterments that are scheduled to cover several years, and in other cases balancing departments which had become unbalanced as a result of the manufacture of new lines and the use of new materials. Four of the mills that have erected new buildings are E. E. Hilliard Co., Buckland, Conn., Pontoosuc Woolen Mfg. Co., Pittsfield, Mass., S. Slater & Sons, Inc., Webster, Mass., and Pawtuxet Valley Dyeing Co., Phenix, R. I. Engineering work in connection with each of these developments is in charge of Chas. T. Main, engineer, Boston.



New Wool Cording, Spinning and Finishing Building of E. E. Hilliard Co., Buckland, Conn.

E. E. Hilliard Co.

The most recent construction work to be completed at the plant of the E. E. Hilliard Co., manufacturers of women's wear cloakings and skirtings and men's suitings and overcoatings, at Buckland, Conn., is a new carding, spinning and finishing building. Work on the building was completed early in the winter and machinery is now being put in place. The new structure is part of a plan of reorganization of the plant and replaces old buildings in which manufacturing was carried on under many difficulties. It is 220 ft. long by 78 ft. wide, 3 stories high. This is the largest single addition ever made by the company.

The building is of slow-burning mill construction with brick walls, stone trimming, steel sash, and steel beams. The window area is large and permits unusually good natural lighting conditions. To accommodate the machinery to the best advantage, the bays are wide with long spans.

In the layout of the departments a portion of the first floor is used for wet finishing. The machines are set over concrete trenches to facilitate drainage, and the floor between the machines is concrete, paved with brick. The rest of the first story contains dry finishing equipment and this floor as well as the other two floors is wood plank with maple top to give a good working surface.

The second floor is all used for carding. Here have been built a number of wool bins back of the card feeds to which is blown the raw stock from the picker room. These bins are of sufficient size to provide at all times a ready supply of picked stock for the cards. The blowing system is modern in every detail. The third floor of the mill is used entirely for mule spinning, the mules being driven by individual motors.

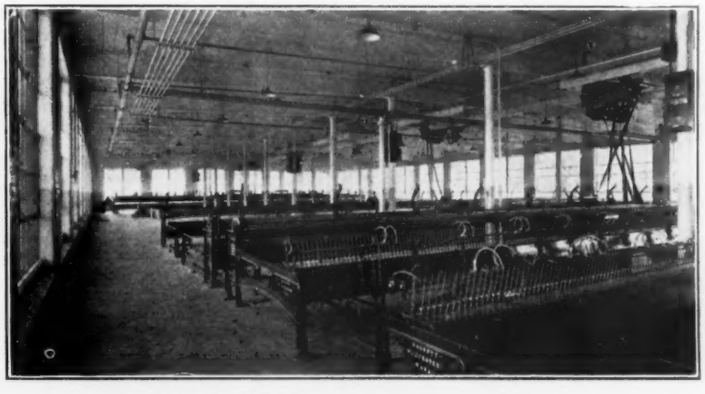
The building is supplied with heating, sprinklers and a combined system of general and individual lighting. The toilets and elevator also serve an adjoining building. Chas. T. Main, engineer, of Boston, was in charge of the work. Construction work was done by H. Wales Lines Co., Meriden, Conn.

Pontoosuc Woolen Mfg. Co.

The new carding and spinning mill of the Pontoosuc Woolen Manufacturing Co., Pittsfield, Mass., manufacturers of men's wear, woolen suitings, cheviots and cloakings, is nearing completion. It is 165 ft. long by 85 ft. wide, three stories high, designed so that a fourth story may be added in the future. The walls, with the exception of the south end, are of brick with steel sash. The south end is temporary and is of wood construction. Steel beams with wood plank are used for all floors and the roof. At one end is a tower in which are located the stairs, elevator and toilets. A bridge connects this tower with the older part of the plant.

In the new mill the spans are 30 ft. long with a column spacing of 28 ft. This arrangement provides a very clear floor for the installation of the various machines. The first floor is to be used entirely for carding. Wool bins have been built back of the card feed. The wool stock will be blown into these bins from the picker house, which is located in another part of the yard. Mules, driven individually by motors, are to be installed on the second and third floors.

The mill will be equipped with steam heating, electric lights and automatic sprinklers. Chas. T. Main, engineer, of Boston, is in charge of the work. Casper Ranger, Construction Co., Holyoke, Mass., are the contractors.



Part of New Mule Spinning Room, E. E. Hilliard Co.

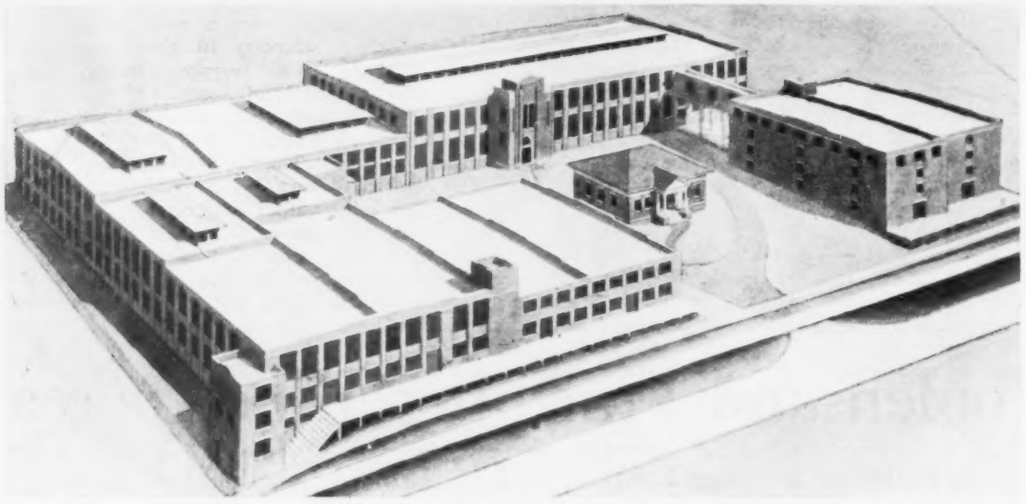
S. Slater & Sons

As part of the plan for general reorganization and improvement of working conditions at the converting plant of S. Slater & Sons, Inc., Webster, Mass., there has recently been completed a new color shop, 104 by 63 ft., two stories and basement. The building was designed so that it may be extended from each end in the future. It is of slow-burning mill construction, with brick walls, steel sash and wood roof. The basement will be used for the storage of color and miscellaneous supplies used in cloth printing.

On the first floor are the color mixing machines, color tanks, etc. This floor is of reinforced concrete and is drained at convenient points. The second floor is of wood and here will be located a modern chemical laboratory, the engraving room for the entire plant and a storage room for print rolls.

Aniline Building

In the same yard another addition



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The picture above shows the new Thomaston Bleachery at Thomaston, Georgia. Robert & Co., Engineers, Atlanta, Georgia.

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is rapidly nearing completion. This is known as the aniline building. It is 132 by 77 ft., one story, varying in height to suit the requirements of the different departments. The construction of this addition is also the slow-burning type with brick walls, steel sash and wood roof. The floors are to be of concrete, with machine trenches for the washers. Part of this building is 20 ft. high, allowing plenty of head-room over the aniline machines. Another part is to be used for the mixing of aniline. A mezzanine floor is built around the sides of this room. The balance of the building is used for cloth washing and tentering.

The engineering work in connection with these two additions, as well as many changes of process operations in other parts of the plant, are in charge of Chas. T. Main, engineer, Boston, Mass. H. Wales Lines Co. are the contractors.

Pawtuxet Valley Dyeing Co.

The new worsted yarn and piece goods dyehouse which is under construction will replace a dyehouse that has been in use for a number of years by the Pawtuxet Valley Dyeing Co., at Phenix, R. I. The walls of the new building are of brick, with wood sash, and the roof is of wood construction with a monitor running practically the entire length. This new structure is being built over and around the old dyehouse, in which production continues without interruption due to the building operations.

The dyeing machines are to be relocated over new concrete trenches to give more efficient working conditions. The floor space between the machinery is paved with vitrified brick. A portion of the building will be used for dry finishing and a convenient office is to be fitted out for the dyer. A ventilating system of the latest type will keep the rooms free from steam and fog under the most trying conditions.

New Woolen Yarn Mill of Pontoosuc Woolen Manufacturing Co., Pittsfield, Mass.

Power Addition

A few years ago this company built a similar addition to the plant, in the basement of which was located a steam turbo-generator. This furnishes not only electric power for the plant, but use is made of the exhaust steam for boiling kettles and heating water. At present another unit of smaller size is being installed to care for the added demand for power and for use at such times as the entire plant is not in operation.

Heating, lighting and sprinkler systems, and a short lift hydraulic elevator, complete the mechanical equipment. Upon the completion of the new work the old walls, roof and columns will be removed. Chas. T. Main, of Boston, is the engineer in charge of the work.

Lehigh Silk Hosiery Mills, Inc.

Build Four-Story Concrete Mill for Manufacture of Full-Fashioned Silk Stockings—Other Buildings Are for Dyeing, Bleaching and Finishing, Garage, Cafeteria, Rest Room and Boiler Room—Provision Has Been Made for Future Increase of This Plant

AN inspection of the new manufacturing plant of the Lehigh Silk Hosiery Mills, Inc., located in Philadelphia, convinces one that it was planned with the idea of giving its employes an ideal work shop, thoroughly modern, in order that the nationally known "Lehigh" full-fashioned silk stocking would be produced under the best obtainable conditions, as well as centralizing the various processes and operations of manufacture.

The new plant consists of a four-story, reinforced concrete building, 89 by 190 ft., with a two-story projection, 54 by 61 ft., the first floor of which is a garage and loading space, and the second floor a cafeteria and rest room. There is also a one-story reinforced concrete building, 35 by 188 ft., which houses the dye and bleach rooms, pump room and boiler house, with a basement under the dyehouse portion of the building. The cafeteria and dyehouse are of beam and girder reinforced concrete construction, and the four-story building is the Smulski flat slab reinforced concrete type, all designed for 120 lbs. per sq. ft. live load.

Curtain walls in the main buildings are constructed of interlocking tile with Pentex finish, giving a smooth finish on the inside and a tapestry brick appearance on the outside. Curtain walls in the dyehouse are of concrete. Rolled steel sash with pivoted ventilating sections are used throughout the buildings with the exception of the dyehouse monitor, where pivoted wooden sash are used.

The cement floors which occur throughout the building consist of a one-inch finish coating, placed on top of the structural slab after the buildings were entirely enclosed. The buildings are equipped with a modern two-source supply automatic sprinkler system with a storage tank located over the main building. The upper part of the storage tank is used for

New Mill of the Lehigh Silk Hosiery Mills, Inc., Philadelphia

supplying water to the toilet rooms. The buildings are heated by a low pressure vacuum steam system.

An electric freight elevator is conveniently located for interchange of material between floors and loading platform. The elevator hatchway openings are equipped with Richmond counterbalanced, corrugated iron doors. Spacious toilet and locker rooms are located in each end of the main building in each story and in the dyehouse. Near each locker room is located an ice-cooled drinking fountain.

Arrangement of Departments

A machine shop for the maintenance and repair of the plant equipment is located in the third story, and is equipped with the latest type machinery. Stairways are located at each end of the building. Raw silk is stored in a vault adjacent to the soaking room in the fourth story, and in this story are also located the winding, doubling, twisting and coning departments, as well as knitting machines. The entire third story, except the area occupied by the machine shop is used for knitting, the leggers and footers being conveniently located to give the most advantageous route to goods being manufactured. Each full-fashioned machine is individually driven by an electric motor. The machines are located on each side of the center line of the building and back against the building columns. This arrangement gives a wide aisle down the center of the mill and also an aisle between the machine fronts.

Electric Lighting

In the main aisle lights are located in every bay, and in the machine aisle there are six light outlets equally spaced over the length of the machines and in the center of the aisle. These lights are controlled by ceiling pull switches in batteries of three lights per switch. This arrangement differs from the usual arrangement of lighting full-fashioned machines, but gives a very flexible, even illumination. Receptacles are placed on the columns behind the machines for extension cord use in repairs. Power conduits for the machines are run on the ceiling below, and one inch conduit branches are run concealed in the floor slabs from a junction box at each column to each machine. In this way conduits which are ordinarily unsightly and in the way are placed so that they do not interfere with the operations of the plant.

The second story is used for the shipping, finished stock storage and sorting. The offices, embroidery machines, boarding and raw stock departments are located in the first story. The dyehouse, boiler and pump rooms are located south of the main building at first floor level.

Power Department

Two high pressure, horizontal return tubular boilers of 200 h. p. each are installed in the boiler room for furnishing steam to the various processes used. Oil is used as fuel and is delivered to Coen burners by a combination steam and electric pump unit. A 10,000-gal. storage tank is installed in the yard adjacent to the east boiler room wall. The boilers are connected to a self-supporting radial brick chimney which has "Lehigh Silk Hosiery" set in the brick in white enameled tile letters, which draws the very positive attention of passersby. Space has been provided in the boiler room for the addition of another boiler at some future date.

Next to the boiler room is located the pump room in which the house, boiler and vacuum pumps, gauge board, feed water heater and main switchboard are located. This room has also been planned with a thought to the future, for space has been allotted future generating units should it become desirable to install them.

The dyehouse located to the west of the pump room is modern in every detail. A Permutit water softener with a 20,000-gal storage tank above the roof supplies soft water for the dye machines and boiler feed, thereby eliminating much of the damage caused by raw water. At the east end of the dyehouse over the chemical and toilet rooms is located a storage tank with a coil which supplies hot soft water to the dye machines. The use of hot water in the dye machines naturally increases the speed of the dyeing process and saves considerable steam.

The dye machines are of the enclosed, revolving type as manufactured by the Smith-Drum Co. These are located along the south wall of the room and discharge either into a trench or into pipes leading to dye storage tanks located in the basement. These tanks are so arranged that the dyestuff can be pumped back into the dyeing machines as desired. The bleach room is located to the west of the dye room and great care was exercised to make this room as dust-proof as possible. An electric driven extractor is installed in the dye room and also in the bleach room.

Care was used in installing electric conduits in the dye and bleach rooms, to eliminate the condensation usually found in conduits in damp locations. This was accomplished by using moisture and weather-proof fixtures for lights, switches and receptacles, and by using cast iron gasketed junction boxes with tapped connections for power conduits. All conduits were run concealed. The yard between the dyehouse and main building is paved with concrete.

The plant was designed by William H. Gravell, engineer, and was constructed by the Turner Construction Co. Work was started in October, 1924, and the owners obtained occupancy in April, 1925.

Georgia and Tennessee Mills Increase

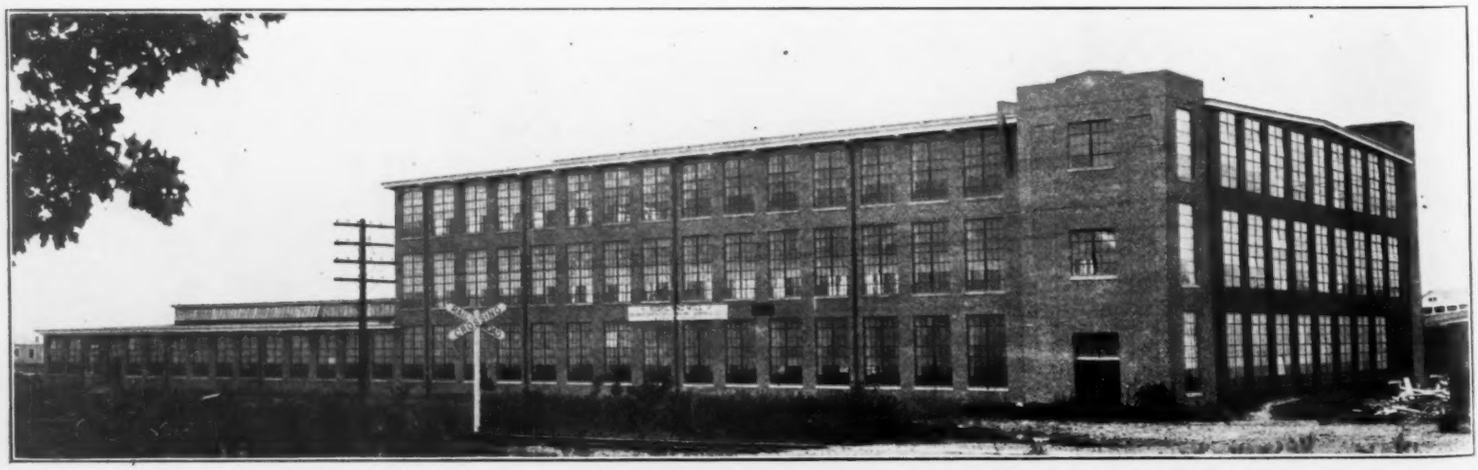
New Cotton Cloth Plant for the Highland Mills at Griffin, Ga., Equipped with 12,800 Spindles and 482 Looms—Yarn Finishing Plant at Chattanooga, Tenn., for the Central Franklin Process Co.—Magnet Knitting Mills' Extension at Clinton, Tenn.

By H. C. Swannell

J. E. Sirrine & Co., Engineers, Greenville, S. C.

ONE of the new projects completed and placed in operation during the last year is the new cotton cloth plant of the Highland Mills at Griffin, Ga. The structure is 352 ft. long by 108 ft. wide, and is of standard slow-burning mill construction. A section 192 ft. long by 108 ft. wide is three stories high and the remainder is one story. In addition to the mill building proper, there is a detached two-compartment warehouse with an opener room, also a boiler and pump house, and a mill village of fifty-seven houses for the workers. Streets throughout the village have been laid off and graded, and such conveniences as water and sewage connections, electric lights in houses and on the streets have been installed.

The raw cotton, in the process of manufacture, is blown from the opener room in the warehouse to the picker room on the top floor of the three-story section. Here the material is opened up and formed into laps that are taken into the card room on the same floor and put through the various carding, drawing and roving processes preparatory for the spinning. The spinning, twisting, spooling and warping is done on the second floor. Then the stock is taken by elevator to the slasher room on the first floor, where it is sized and passed on to the looms. The cloth finally goes



Highland Mills, Griffin, Ga.

into the cloth room for inspection, folding and packing.

The Construction

The mill building is of brick, with wood floors, cast iron columns, and steel beams on the first and second floors. Steel sash windows were used throughout. Plank roofs covered with tar and gravel roofing were installed over both sections of the plant. In both cases these are laid over timbers supported on cast iron columns. There is no basement, except for a small area at one end, and this is used as a dust room. In this case the first floor is of tar concrete laid directly on the earth and covered with a hard pine intermediate and one-inch top maple flooring. First and second story heights are 16 ft. and the third is 15 ft. Both ends of the building have temporary walls to facilitate plant enlargement.

Standard construction was used for the warehouse, which consists of two compartments, one story in height, and each measuring 50 by 100 ft. The boiler and fire pump rooms are in a separate building of brick walls, wood roof, steel sash windows, and cement floors. Like the main mill this building is arranged with a temporary side for a future extension.

Machinery Equipment

Spinning spindles to the number of 12,800, and 482 looms, together with the proportionate amount of preparatory machinery have been installed. With the exception of the pickers, spinning and twister frames, the machines are arranged in small groups and driven from line shafting which in turn is connected to motors either through belts or silent chains. The pickers, spinning and twister frames, have individual motors attached to each frame with belt drive for the pickers and silent chain drives for spinning and twister frames.

Steam for heating and the slashing process is furnished by a horizontal return tubular boiler manufactured by the R. D. Cole Mfg. Co. Underground lines convey the steam at 100 lbs. pressure to the slashers, where it is reduced to 10 lbs. with pressure reducing valves. High pressure steam is distributed throughout the mill and at various places passed through pressure reducing valves before going into the heating coils. With the exception of the weave room, the different rooms are heated from coils suspended from the ceilings. In the weave room, however, six heaters made by the American Blower Co. are installed. These consist essentially of a steam coil in a box over which air is forced by a motor-driven fan. Supplementing these heaters is a heating coil in the roof of the monitor. The gravity return vacuum system of heating is used with automatic temperature controls, which operate in conjunction with the air conditioning system to provide the proper amount of heat in relation to the moisture in the air. The controls are so arranged that either system can be operated independently or together.

Crawford & Slaten, Atlanta, Ga., installed the heating system, and The Bahnson Co. supplied the air conditioning system. Elevator equipment was furnished by the Park Mfg. Co., Charlotte. J. M. Clayton Co., of Atlanta, Ga., installed the power and lighting distribution systems together with the motors, switchboard, transformer equipment, and the village street and house lighting distribution systems. The power wiring is 3-phase, 60 cycle, 550 volt, and the lighting, single phase 115/220 volt, with all wiring in conduit. Electrical apparatus is of General Electric Co. manufacture. Modern lighting was installed throughout. Except for the slasher and weave rooms, where Cooper-Hewitt "Work Light" units are installed, R. L. M. reflectors fitted with 200 watt bowl enameled lamps were used. These are mounted 14 ft. above the floor, spaced approximately 16 ft. apart and arranged in accordance with the machinery layout.

A standard installation of automatic sprinklers with a 50,000 gal. tank on tower as primary supply, and a 1,000 gal. Underwriters' centrifugal fire pump taking suction from a reservoir of 250,000 gal. capacity as secondary supply, has been provided throughout all manufacturing and storage buildings. The outside protection consists of mill yard hydrant system, hose and equipment, all conforming to the standard requirements of the underwriters having jurisdiction. The fire protection system was installed by Crawford & Slaten, of Atlanta. The tank on tower for fire protection is divided into two compartments, one of which is connected to the fire protection system; the other with capacity of 25,000 gal. supplies drinking and service water for the village and plant. The tank was furnished by the R. D. Cole Mfg. Co., Newnan, Ga.

J. E. Sirrine & Co., engineers, Greenville, S. C., had charge of making up the plans and construction work on this project. Actual construction of the buildings was done by the Fiske-Carter Construction Co., Greenville, S. C.

Franklin Process Co.

The Franklin Process Co. of Providence, R. I., is erecting in Chattanooga, Tenn., a new yarn finishing plant, which will be known as the Central Franklin Process Co. The main building will be 160 ft. by 69 ft., two stories, with an attached dyehouse 102 ft. by 82 ft., and a boiler house 41 ft. by 42 ft., making a total of 41,000 sq. ft. of floor space. All buildings are of standard slow-burning construction, brick walls, cast iron columns, steel sash windows and wood roof. There will not be a basement except for dyeing machine pits, etc.

The new plant is almost an exact duplicate of the company's Greenville, S. C., plant, and the work to be carried on will be of the same nature. Approximately fifty employes will be required. All of the machinery will be motor driven. Electric current for power and lighting requirements will be furnished by the Tennessee Electric Power & Lighting Co. of Chattanooga, Tenn.

J. E. Sirrine & Co., engineers, Greenville, S. C., are in close cooperation with the owners in making the new plant thoroughly modern in every respect. The general building contract was awarded to Gallivan Building Co., Greenville, S. C., and that for the boilers to Walsh & Weidner Boiler Co. Complete hydrant and sprinkler system will be installed by Grinnell Co., Inc. Elevator equipment is being put in by Westbrook Elevator Mfg. Co. of Danville, Va.

Magnet Knitting Mills

Construction work on the extension to the Clinton, Tenn., plant of the Magnet Knitting Mills is progressing and is about completed. The new structure, while an extension to the existing manufacturing plant, is a separate building connected by covered passageway to the present factory. It is entirely of reinforced concrete construction, two stories in height, and measures 97 ft. by 228 ft. The outside walls are concrete trimmed with brick. The first floor has tar concrete foundation for the sub-floor with maple top flooring. The second floor is formed by a concrete slab finished with tarred sand, and heavy intermediate plank floor topped with maple. The roof is also of reinforced concrete, covered with tar and gravel roofing.

The new plant, which is to be operated in conjunction with their plants making seamless hosiery, will be devoted to the manufacturer of full-fashioned hosiery. A capital layout of approximately $300,000 was required.

J. E. Sirrine & Co., engineers, Greenville, S. C., made the plans and specifications for the building, layout of the machinery, lighting, heating and plumbing systems. Only a portion of the machinery for which the building is designed will be installed at present; the building, however, is wired for the ultimate installation. The knitting machinery is of the latest design and driven by individual motors.

Lighting System

The lighting system is specially laid out for the type and arrangement of the machinery. The arrangement of the lighting units was based on this, and also on the position of the operator in reference to the machinery, so as to eliminate shadows as far as possible, and to direct the light on the work. Units of sufficient size and number were used to give proper illumination during the evening and on extremely dark days.

A lighting fixture was selected for installation in this plant that consists mainly of standard R. L. M. reflectors with enameled glass enclosing globes. This type of fixture diffuses the light so that there will be no reflection from the polished parts of the machines into the eyes of the operators. Three hundred watt Mazda clear lamps are used in these fixtures, which are mounted 14 ft. above the floor and spaced 10 ft. apart across the mill by 14 ft. lengthwise. The Power Equipment Co. of Knoxville, Tenn., is doing the work.

An important feature of the operation of a plant of this kind is the air conditioning and temperature control. This is effected by automatic controls with thermostatic features connected to the heaters. There are eight heating units on each floor, each unit consisting essentially of a coil through which low pressure steam passes and a motor-driven fan to force air between the pipes forming the coils. The automatic controls decrease or increase the amount of steam passing, according to the temperature. The motor-driven fans are constant speed and are hand-controlled. Engert-Long Co., of Knoxville, Tenn., are installing the heating system.

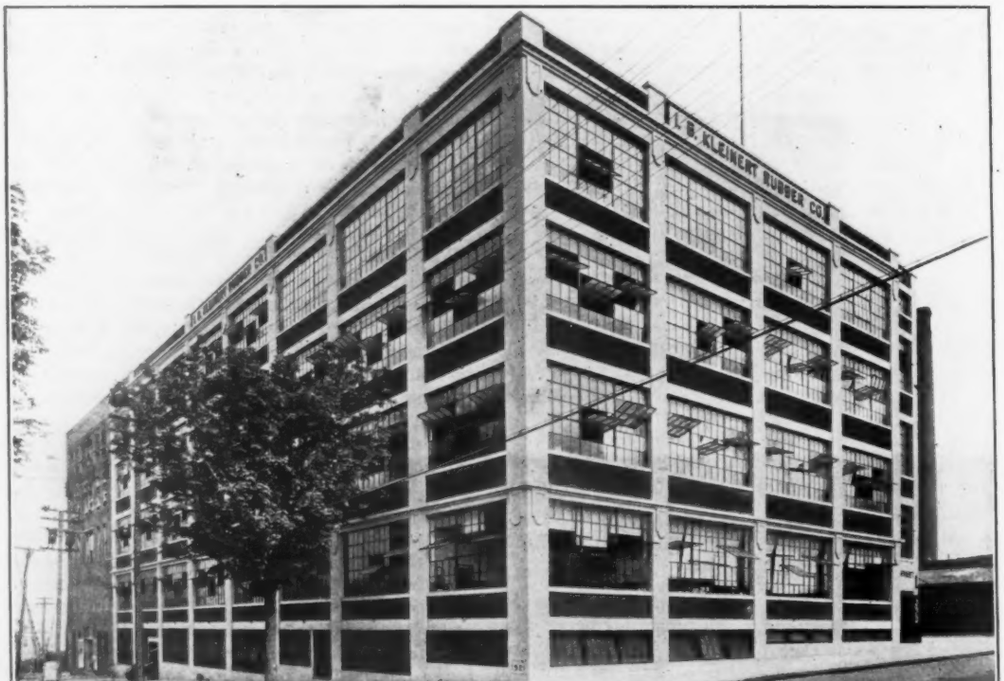
Grinnell Co., Inc., has been awarded the contract for the fire protection system. This includes the installation of automatic sprinkler system in the new building.

Neild Mfg. Corp. Expands

Large Addition to Weave Shed for 250 Automatic Looms—Partial Rearrangement

EVIDENCE of improved conditions in the New England cotton manufacturing industry was given when ground was broken in September for a substantial addition to the weave shed of the Neild Manufacturing Corp., New Bedford, Mass., manufacturers of plain and fancy cotton goods, silk, rayon and mercerized specialties. This addition is now completed and balances the weaving capacity with the other departments, for as a result of the rather large use of silk and rayon yarns, the cotton yarn department of the mill is enabled to provide for a larger number of looms. For several months past, the weaving department has been running overtime until 8 P. M., and it is doubtful whether this overtime work can be

Addition to Weave Shed of Neild Mfg. Corp., New Bedford



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discontinued even with the larger loom capacity.

The new addition is built at the north end of the original weave room on land that was owned by the company, and adds about 21,500 sq. ft. of floor area per floor. It is a one-story buildng with basement, built of brick and concrete, with cast iron columns and steel beams carrying the floor and roof. The floor and roof are of the usual wood plank construction. The type of construction is in harmony with the older part of the plant. The building measures 191 ft. in length by 112 ft. in width, and with the length of the present weave shed makes an overall length of about 650 ft. The height of the basement is 7½ ft. in the clear, and the first floor has an average of 13 ft. in height.

Slashers and Cloth Room Moved

The first floor of the addition is divided into two rooms by a partition running crosswise. Each room is equipped with modern sanitary facilities for the employes. One of these rooms will be occupied by the cloth room and the other by the slashing room and drawing-in work in a partial rearrangement of the plants following the building of this enlargement. The cloth room and the slashing department were moved from the original weave shed and the space that they occupied taken up with 250 new automatic looms of the regular 40-inch type, which constitutes the bulk of the mill's present equipment.

To provide power for the machinery moved to the new space, the main shafting is being continued from the original weave shed, being run at the ceiling of the basement of the new building. All machinery will be driven by belts and the mill's present steam power plant is adequate to run the additional machinery.

The new machinery installed as a result of this enlargement includes, in addition to the looms mentioned above, one Saco-Lowell slasher, making four machines of this type to provide warps for the looms. Little, if any, new cloth room machinery is needed. The artificial lighting of the addition will be general illumination, 75 watt lamps being used. In the space to be occupied by the new looms, local illumination will be employed with one 40-watt lamp to each loom. In this space the American Moistening Co. humidifying equipment is installed, as is the case in the original mill.

The J. W. Bishop Co., of Worcester and New Bedford, were the general contractors for the work. Plumbing was done by Jeremiah Coholan, contractor, of New Bedford. The sprinkler system was installed by The Grinnell Co. of Providence, R. I. All the work for the heating system and electrical wiring was done by the mechanics employed by the corporation under the supervision of Abraham Savage, master mechanic of the Neild Manufacturing Corp. Leo L. LaBrode, New Bedford, was the architect-engineer, and Abraham Savage handled all the mechanical features.

New Buildings at Esmond Mills

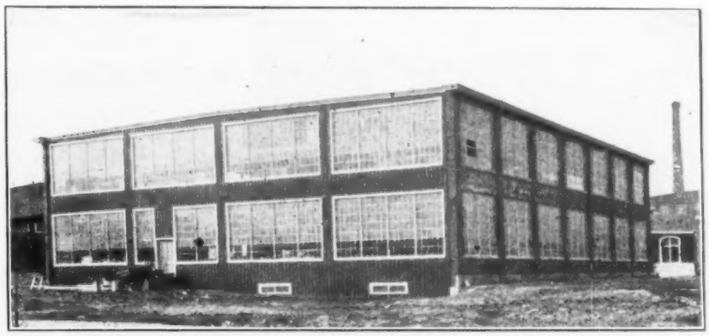
Woolen Blanket Mill, Two Stories High, and New Finishing Building Erected at Esmond, R. I.

AMONG the most interesting examples of modern textile mill construction are the two new buildings erected at Esmond, R. I., by the Esmond Mills, manufacturers of fancy cotton and wool blankets and robe cloth. One of these buildings is a complete woolen blanket mill; the other is a finishing building for cotton blankets.

New Woolen Mill

The woolen mill was completed in the summer of 1925, and is of steel and brick construction with wooden temporary ends left for possible expansion. The building rests on foundations supported by Simplex concrete piles averaging about 25 ft. in length. The present dimensions are 120 by 115 ft., two stories high, with outside toilet towers. The story heights are 14 ft. for the first story and 16 ft. for the second story. Of particular interest is the steel frame construction which allows an abundance of light by providing large window area, rigidity, speed of construction, and low cost. The first floor is of concrete, at grade, while the second floor is 4 in. hard pine plank, ⅞ in. intermediate floor laid diagonally, with ⅞ in. matched maple top floor. Windows are equipped with Fenestra steel sash made by the Detroit Steel Products Co., and have ample ventilation area. Heating is direct radiation throughout, with coils under windows.

This mill is a very modern woolen blanket mill, designed for the manufacture of highest grade blankets. The latest machinery was purchased and the mill has been laid out for the minimum of handling. It is so built that it can readily be expanded without interfering with the arrangement of machinery equipment. The carding, spinning, weaving, etc., are on the upper floor; the lower floor contains the dyeing, picking, napping, finishing, storage of stock, etc. Group drives are used throughout with the exception of a small number of individual motor drives on finishing equipment. The mill is known as the Woonaska Mill.



New Finishing Building of The Esmond Mills

All steam for heating and processes, as well as power, is transmitted from the main power plant of the Esmond Mills which is about 2,000 ft. away.

Finishing Mill

The new finishing mill was started up on Jan. 11, 1926, and is a radical departure from the ordinary blanket finishing or cloth room. The machinery has been laid to give labor saving, conveyors being used wherever possible, and the blankets are handled only when absolutely necessary. The mill is designed to do away with all trucking that could be dispensed with, and the few trucks that are used are fitted with ball bearing wheels with rubber tires. Transportation between floors is accomplished by means of electrically operated lifts.

All machinery and furniture in the room are painted a gray, and all employes wear gray uniforms, which are laundered each week. The lighting is as near perfect as can be, and machinery and lighting are arranged with the idea of getting the best light possible, so that there is no danger of eye strain.

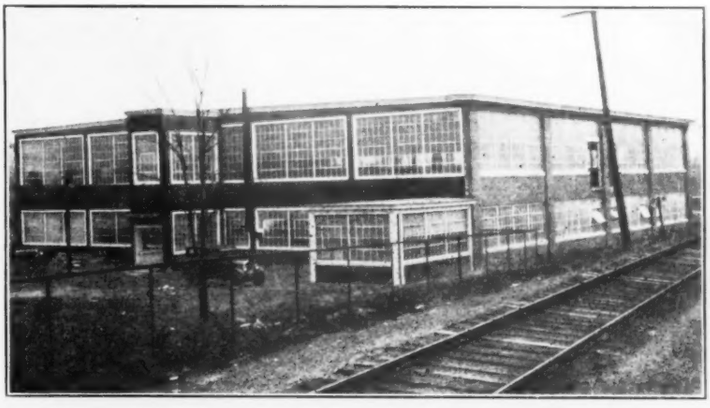
The building, with the exception of the stair and toilet towers, is heated by Sturtevant unit heaters, these being located so that three units heat the upper floor and two units are ample for the lower floor. These are effective in giving uniform distribution of heat and air circulation.

The dimensions of the new finishing building are 140 by 115 ft., two stories high, and the structure has two temporary ends to provide for expansion in both directions. The construction is similar to that of the new woolen mill, being structural steel frame throughout, with brick walls. The outside brick is Bradford repressed brick, while the inside is a high grade face brick of a light gray tone, requiring no paint and easily cleaned. Window area is large and Fenestra sash is used throughout. The manufacturing is on the top floor, and the lower floor is used for open stock of blankets, printing, supplies, etc., the idea being to segregate the actual manufacturing.

This new finishing building lies between the napping room and the storehouse of the main plant, providing for a continuous movement of material in one direction without waste effort. A conveyor bridge runs from the finishing mill to the storehouses on the railroad tracks. All cases, paper boxes, etc., are made in the storehouses and brought over by conveyors to the mill. The goods are then packed and go by gravity conveyors back to the storehouse where they can be either stored or loaded into railroad cars.

The steel framing for these buildings was fabricated and erected by the Boston Bridge Works, Inc., Boston, Mass. All other construction work was carried out by The Esmond Mills' own construction organization.

These additions, carried out in 1925, are part of a general plan of expansion which has been in progress for the last few years, and includes the new power plant which was completed about a year ago and is now furnishing power and steam for the entire plant. George H. Perkins, 200 Devonshire St., Boston, is the engineer in charge of these developments.



Woonaska Mill, at Esmond, R. I., for Manufacture of Woolen Blankets

SALEM, ORE. The Miles Linen Co., which was incorporated about a year ago, increased its capital stock $50,000 at the annual meeting held Jan. 19. The new funds thus created will be used to purchase new machinery and for a general expansion of the plant. If the market continues as satisfactory as in the recent past, the mill will run a night shift in addition to day operation. The new plant in a little over three months, since Oct. 1 of last year, made a profit of $1,248

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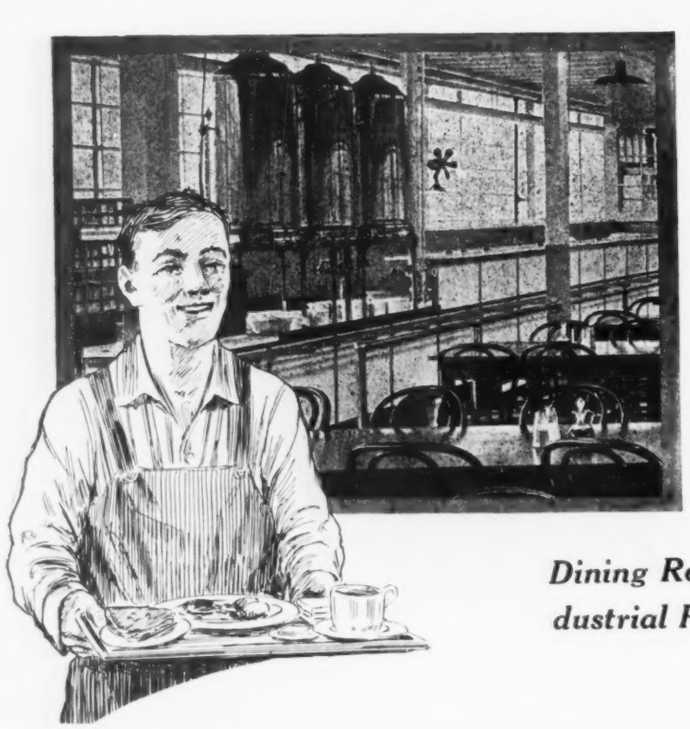

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DETROIT
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MUSKOKGEE

New Mills and Improvements in the Carolinas

No. 5 Mill of the Erwin Cotton Mills Co. Starts Operation with 40,896 Spindles and 1,152 Looms on Denims—Piedmont Manufacturing Co. Electrifies Mill No. 4—Balfour Mills Add 5,000 Spindles and 100 Looms. Besides Building New Power Plant

By H. C. Swannell

J. E. Sirrine & Co., Engineers, Greenville, S. C.

CONSTRUCTION work on the new No. 5 Mill of the Erwin Cotton Mills Co., at Erwin, N. C., has been completed and manufacturing operations started. The new plant is located to the right of Mill No. 2, and, like the latter, the equipment is housed in two main buildings. There are 40,896 spinning spindles and 1,152 looms which, with those in No. 2 plant, make a total of 77,216 spinning spindles and 2,304 looms operated at Erwin by this company on the manufacture of denims.

One of the buildings is two stories and houses the picking, carding, drawing, roving, spinning, spooling and warping equipment. The other, a one-story building, contains the dyeing, slashing and weaving equipment. Cloth room and shipping departments are in a separate building from those in which the manufacturing processes are carried on.

The raw cotton is opened up in a section of the warehouse and then blown to the picker room on the second floor of the two-story building. After the cotton has been cleaned and formed into laps, it is taken to the card room on the same floor, but separated from the picker room by a fireproof wall. Here the carding, drawing, and roving processes are carried on in preparation for spinning. All the spinning frames are located on the first floor. Part of the cotton is spun into filling yarns and part into warp yarns. The filling yarn is taken direct to the looms, while the warp is run through spoolers and ball warpers preparatory to dyeing. In this process the yarn is formed into ropes, with all the strands parallel and not twisted together, and then is put through a dyeing machine where it is given the proper color for the finished goods. After the dyeing process, the various strands of the rope are separated and wound on beams. The slashing comes next and is followed by weaving.

Both buildings are thoroughly modern in construction and appointment. The two-story building, or spinning mill as it may be called, consists essentially of a reinforced concrete skeleton framework with the openings in the outside walls, except for the doors, fitted with steel sash windows. The first floor is tar concrete laid directly on the earth, covered with 3 in. hard pine rough flooring and finished with 1 in. maple. The second floor is built up in much the same way except that the wood flooring is laid on tarred sand over a 9 in. reinforced concrete slab. The roof also consists of a reinforced concrete slab, which is covered with 5-ply tar and gravel roofing material. Reinforced concrete columns of the mushroom type, 20 in. in diameter, support the roof and second floor. These are spaced 21 ft. 4 in. apart lengthwise of the building and approximately 25 ft. apart crosswise. A small area under the picker room end of the mill was excavated and is used for a dust room. Otherwise there is no basement. Brick veneer on the corners and coping enhance the appearance of the building.

Weave Shed Construction

Steel sash windows comprise approximately three-fourths of the area of the outside walls of the weave shed. These are fitted between cast iron columns and supported concrete. Floor construction is the same as the first floor in the spinning mill, except in the dyehouse where the floor is built up to suit conditions. Over the weave room proper a roof of sawtooth construction was built of 3 in. hard pine planking covered with two layers of Celotex insulating material. The roof structure is supported by steel trusses and cast iron columns. Three monitors extending across the building were built in the roof over the dye room. This construction was used because of the type of machinery to be installed.

To facilitate handling of material the two buildings are connected by covered passageways. Special provisions for the installation of piping and electrical circuits were made by the construction of interconnecting tunnels extending the length of the two buildings and across the weave shed.

The spinning mill measures 493 ft. long by 160 ft. 4 in. wide, and the weave shed is 433 ft. 8 in. by 211 ft., comprising a total of 249,592 sq. ft. of floor space.

Motor Drives

Throughout the entire plant motors are used to drive the machinery in the various departments. In many cases one motor to each machine is used, and is connected to the machine shaft by silent chains, gears or belts. This type of drive is used for the pickers, drawing, spinning, spooling frames, dyeing machines, and looms. Motors with shafts arranged for driving four frames are used in connection with the roving frames on the second floor. Elsewhere the machines are arranged so that small groups may be driven from small motors. In such cases the machines are driven from line shafting through belts and a silent chain connects the motor to the shaft.

Steam is used only for heating and process work. It is supplied from a boiler plant that furnishes steam to all the manufacturing buildings, and is transmitted at high pressure to the various buildings where, passing through reducing valves, the pressure is reduced for distribution throughout the rooms. In all the rooms the steam coils are overhead. Automatic pressure valves acting in accordance with the temperature control the amount of steam passing into the coils.

Of great importance in the operation of a cotton manufacturing plant is the amount of moisture in the air. Moisture must be added to the air in different amounts depending upon the outside atmosphere, process of manufacture, and temperature. Humidifier units are placed at regular intervals throughout the rooms and are automatically controlled.

Electric power to operate Mill No. 2 and Mill No. 5 is delivered to a transformer station in the mill yard, over the high voltage lines of the Carolina Light & Power Co. It is transformed to 3-phase, 60 cycle, 550 volts for distribution throughout the mill. Part of the current is again reduced to 110 volts for the mill lighting.

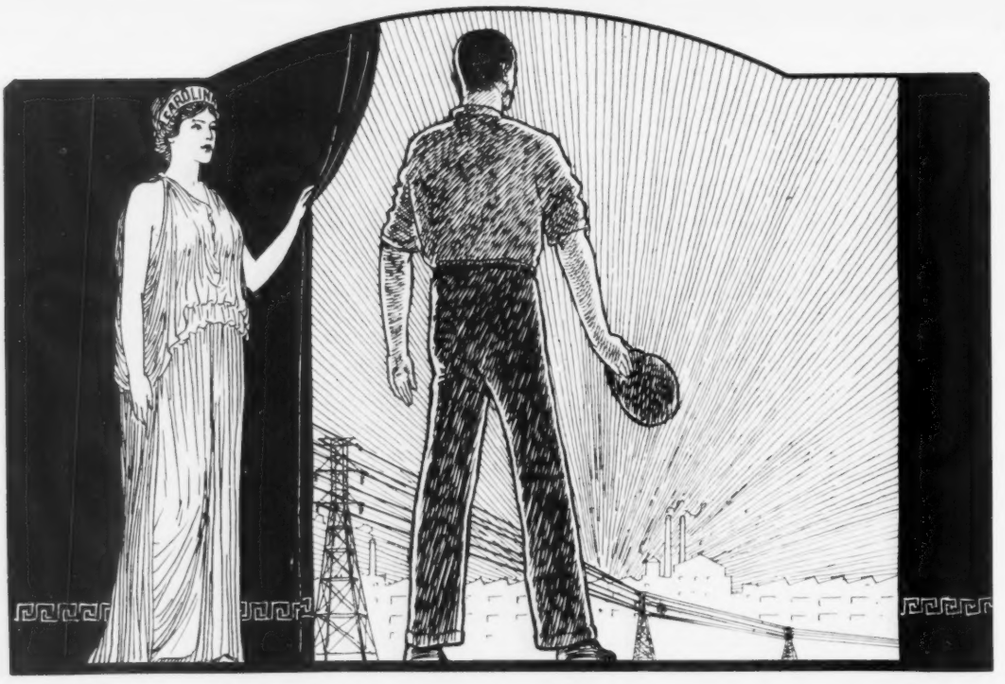
Except for the weaving and slasher rooms, where Cooper-Hewitt lighting units are installed, standard R. L. M. reflectors fitted with 200 watt bowl enameled lamps are used. These are spaced approximately 16 ft. apart and mounted 14 ft. above the floor. All of the wiring is in conduit and that for the individual motors is concealed in the floor. Durham Public Service Co. of Durham, N. C., installed the principal part of the electrical work. The Parks-Cramer Co. furnished and installed the fire protection, heating and air conditioning systems.

J. E. Sirrine & Co., engineers, Greenville, S. C., were the engineers in charge of construction, and J. L. Crouse, Greensboro, N. C., was general contractor. Electrical apparatus was supplied by the Westinghouse Electric & Mfg. Co. Most of the machinery installed is new and was furnished by Saco-Lowell Shops, Whitin Machine Works, Woonsocket Machine & Press Co., and Hopedale Mfg. Co. Chain drives were furnished by the Morse Chain Co.

Piedmont Mfg. Co.

The Piedmont Mfg. Co., Piedmont, S. C., are making changes in their power plant and electrifying one of their buildings. A turbo-generator,

Erwin Cotton Mills, No. 5 Plant; Two-Story Building for Spinning at Left; One-Story Weave Shed; Mill No. 2 in Background at Right



Labor Conditions More Satisfactory than Elsewhere

There are many sections of the south claiming—and rightly so—special consideration because of labor conditions. When it comes to a direct comparison, however, the choice should be made solely on the basis of FACTS. Here are the FACTS about labor in the Central Carolinas:

1. The population is 99.88% native born.
2. The birth rate is higher than any equal registration area in the United States and the death rate is below average.
3. The population has the highest percentage of the Anglo-Saxon race of any State in the Union.
4. Most wonderful resources for production of food products exist, assuring adequate supply of fresh foods.
5. The year around uniform climate is conducive to high labor efficiency.

The Central Carolinas have more population within an area of one hundred miles from the center than any other equal area in the Southeastern States. Industries located in this section of the Carolinas are in a position to draw labor from the great farming sections of the east as well as the mountainous sections of the west.

Before you decide on a location for your branch plant or industry let us furnish you with complete information about the Central Carolinas without obligation on your part. Your inquiries will be treated confidentially.

CAROLINA POWER & LIGHT COMPANY
YADKIN RIVER POWER COMPANY

General Offices, Raleigh, North Carolina

CENTRAL CAROLINAS

together with condenser, switchboard, motor and transformer equipment have been purchased from the Westinghouse Electric & Mfg. Co. for installation at this plant. The work in general consists of the replacement of an engine with the turbo-generator and application of motors for driving the machinery in what is known as Mill No. 4. This change will complete the electrification of these properties. Plans for these changes were made by J. E. Sirrine & Co., engineers, Greenville, S. C.

Balfour Mills

During the year 1925, Balfour Mills, at Smyth, N. C., have not only added new machinery to the equipment in their mill but also have built a new 1,000 kw. steam-electric power plant. New equipment installed was for an additional 5,000 spinning spindles and 100 high-speed Hopedale looms. This will make a total of 17,500 spindles in this plant. Additional floor space was not required as the original plans, as drawn up by J. E. Sirrine & Co., engineers, Greenville, S. C., contemplated this new machinery. Extra help has been employed, of course, and 25 modern new houses have been erected to house the increased number of operatives.

Since the Balfour Mills started operating, the Blue Ridge Power Co. has furnished the electric power. However, due to the unprecedented drouth of last summer, and other conditions, it was decided to erect a new steam-electric power plant as an additional source of power supply. The capacity of the plant is such as to be not only sufficient for the present needs but also for probable future requirements. The new plant is close to the mill and has a capacity of 1,000 kw. Underground circuits are being installed for transmission of the energy from the generator to the switchboard in the mill. Connection with the power company's lines will not be severed, but rather arrangements have been made to tie in the new plant with power company's system. All of the new electrical equipment, including the turbo-generator and switchboard, was purchased from the General Electric Co.

Power Plant Building

The building is 53 ft. wide by 72 ft. long, of reinforced concrete and brick construction. It is divided into two main sections, namely, boiler room and turbine room, 46 ft. by 53 ft., and 26 ft. by 53 ft., respectively. A feature in the design of this building is the elimination of one floor and making the main operating floor what is generally considered the turbine room basement floor. This was accomplished by mounting the turbine on a pedestal type foundation and attaching a gallery of subway grating to the foundation. With a steel stairway leading to the gallery, easy access to the turbine is given, and at the same time the arrangement produces better conditions for work around the condenser, pumps, valves and other auxiliaries.

The boiler room is arranged for the installation of three boilers. A battery of two 225 h.p. boilers is installed at present. These are fitted with superheaters, stokers, and soot blowers. The boiler equipment is designed to furnish steam to the turbine at 235 lbs. gauge pressure, and 100 deg. F. superheat.

The engineering work, as in the case of the mill proper, was done by J. E. Sirrine & Co., engineers, Greenville, S. C. Contracts covering the main items of equipment were awarded as follows: Building, Fiske, Carter Construction Co., Greenville, S. C.; turbo-generator and switchboard, General Electric Co.; condensing equipment, H. Wheeler Mfg. Co.; boilers and superheaters, Babcock & Wilcox Co.; stokers, Combustion Engineering Corp.; soot blowers, Diamond Power Specialty Corp.; chimney, Alphons Custodis Chimney Construction Co.; installation of electrical apparatus, Huntington & Guerry.

Rollins Hosiery Mills Increase

Addition Built for Manufacture of Full-Fashioned Hosiery—Building Designed for Future Expansion

DURING the spring of 1925, the popularity of their "Runstop" full fashioned stockings made it necessary for the Rollins Hosiery Mills, Des Moines, Iowa, to expand their manufacturing facilities. Accordingly, Lockwood, Greene & Co. were authorized to prepare the necessary plans and to carry on the work. Inasmuch as the plant of the Rollins Hosiery Mill is located on a large plot of ground in a part of Des Moines where land is relatively cheap, it was decided that the new addition should be one story with sawtooth roof. It is laid out to take machines arranged with their axes in a north and south direction, three in a line and two lines per bay. Expansion both to the west and to the south is provided for.

The present building is 94 by 136 ft., and provides for the installation of 42 machines. A steel frame with trusses, which is carried in to brick piers at the walls, provides a vertical faced sawtooth, the sash in which is standard side wall sash with mechanically operated, center pivoted ventilators. This eliminated any complication in steel framing and by the use of standard side wall sash the usual difficulties from leaks when a sloping sawtooth is used are eliminated. The sash is run continuously from end to end of sawtooth, passing in front of the columns and eliminating the necessity of a joint were the sash in the same plane as the column. The lower ventilator in all side walls is provided with the projected type sash, while the upper ventilator is center pivoted chain operated.

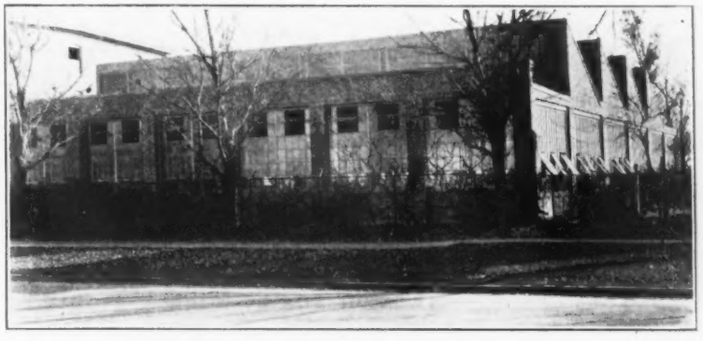
The roof slab is gypsum poured in place, the slab form for which is a sheet of gypsum wall board supported between steel members. Gypsum was used because of its insulating value both in summer and in winter. Floors are of maple laid on a tar and sand cushion atop a concrete base.

Unit Heaters Used

Somewhat of a departure in this type of plant for a heating system is the provision of two unit heaters. These are hung from the trusses. They each provide 7,000 cu. ft. of heated air per minute, which is distributed to all parts of the building by a simple system of fractionating and velocity control ducts, the ends of which deflect the air slightly downward. The selection of this type of equipment was made because of its simplicity, ease of control, lower first cost, and its ability to provide heat quickly at the points desired. A thermostatic control installed with the units is designed to maintain even temperature conditions in the plant. The gypsum roof slab is an aid in this direction.

Outlet boxes for the motors driving machines are mounted at the base of the columns nearest the motors. The columns being of H-section allows for the mounting of these boxes in a well protected location. Extension cord receptacles are provided at the base of a number of columns in a manner similar to the motor outlet boxes. The lighting system is designed for Cooper-Hewitt lights, mounted over the working aisles, three units per machine.

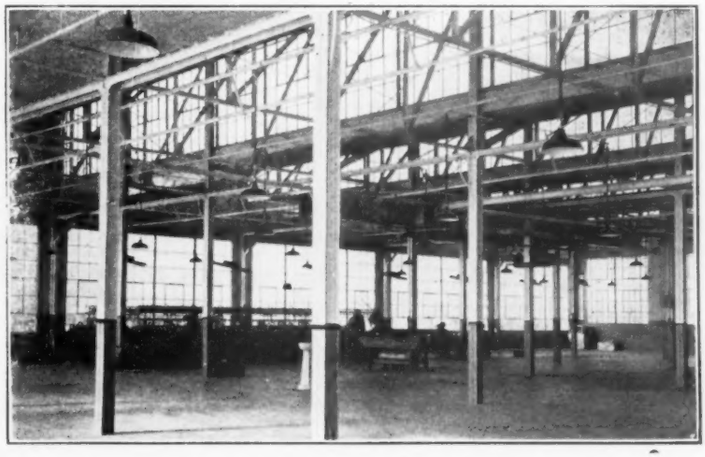
The building is provided with an automatic sprinkler system. It is protected on the east side where it adjoins an existing warehouse, by hollow metal sash glazed with wired glass and a steel roll-up door with fusible link. The general construction work was done by Arthur H. Neumann & Co.; the heating by the Walker Heating & Plumbing Co.; the electrical work by the Capitol City Electric Co.; and the sprinkler work by the Iowa Fire Protection Co., all of Des Moines.



Addition to Rollins Hosiery Mills, Des Moines, Iowa

On Friday, Dec. 4, this new addition was officially opened when the Rollins Employes' Representative Committee of Service gave a housewarming party and dance. Invitations were extended to Rollins employes and friends, including the membership of the Des Moines Chamber of Commerce and all other civic clubs.

H. T. Rollins, president of the Rollins Hosiery Mills, with Mr. Crawford, superintendent, were those most active in connection with the work. William Sylvester, superintendent of the full fashioned department, also gave his active cooperation in providing a well rounded plant.



Interior View, Rollins Hosiery Mills Addition, Showing Excellent Light

PROVIDENCE, R. I. Officials of the Atlantic Knitting Co., 143 Summer St., have organized the Fisco Mfg. Co., as a subsidiary company to manufacture knit goods, etc. Joseph M. Finkelstein is president of both organizations.

-and now the MID-SOUTH presents its case

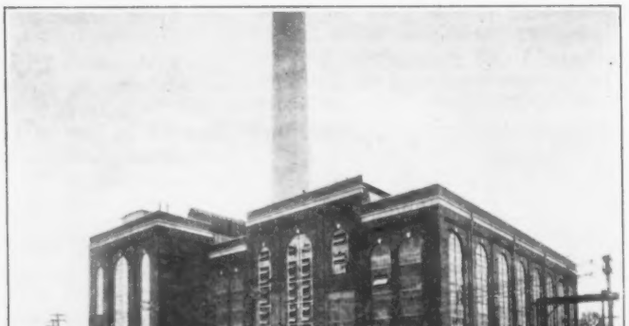
Arkansas - Mississippi - Louisiana

These three great states—wonderfully rich in resources—respectfully submit they offer superior advantages for

Cotton Textile Mills
Paper and Pulp Mills
and Other Industries

COTTON—

These three states produce around three million bales of cotton annually. In 1925 the aggregate production exceeded 4,500,000 bales.



Sterlington Power Station in World's Largest Natural Gas Field. This Station is to be extended to 200,000 h. p. capacity

TIMBER—

These three states have a wooded area of 64,020,000 acres, with a cut-over land area of 38,983,000 acres containing second growth stumpage. These cut-over Pine Lands will produce half a cord of wood per acre per year, pine growing faster in this section than in any other section in the world. Two hundred thousand acres will keep a 100,000 ton mill supplied forever.

MINERALS—

These three states produced $105,316,000 of mineral products in 1923, the past year for which figures are available. The production since has increased.

LABOR—

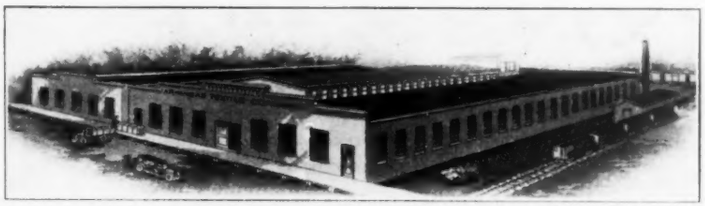
These three states have a population almost wholly pure native American, of the loyal "a fair day's work for a fair day's pay" type. In the hill counties the population will run better than 99% native white.

Interior Views, New Cotton Yarn and Knit Underwear Plant of Arkansas Textile Co.

Arkansas Textile Company

Remodels Building at Pine Bluff and Installs Cotton Yarn Machinery and Underwear Manufacturing Equipment

THE Arkansas Textile Co. was organized to manufacture cotton yarns and underwear, starting operations in April, 1925. A cotton compress building was rebuilt and adapted to the needs of the plant. The building is of brick construction, 300 ft. long and 250 ft. wide, with a skylight running through the center the full length of the building. The side walls are 19 ft. high and the height from the center is 33 ft., all of heavy construction. A matched oak floor was laid. Steel windows, 6 by 9 ft., with ribbed glass were installed in the four walls of the building, which with the skylight, give perfect light throughout the entire plant. Windows were equipped with double ventilation and with the high ceilings there is an excellent circulation of air, which is very important in this section of the country in the summer. The roof throughout is gravel composition.



Arkansas Textile Company, Pine Bluff, Arkansas

It was necessary to build an addition 80 by 40 ft. on the existing building for a picker room. This is of brick construction with a cement dust bin constructed its entire length to accommodate the picker waste. Owing to the high ceilings, it was necessary to put beams between the posts in both directions to hang the shafting. In the sections where necessary and where the heavier shafting came, these were reinforced by trusses, which prevent all vibration. A heating system with flat radiators between the windows was used.

Natural Gas for Fuel

The sprinkler system was installed throughout by the Grinnell Co., the humidification is American Moistening Co. equipment. Power is furnished by the Arkansas Light & Power Co., who recently opened a large hydro-power development at Remmel Dam on the Ouachita River, which gives this section an unlimited quantity of hydro-electric power. From the transformers, the power lines are strung on the outside wall of three sides of the building, and are connected through the wall to the motors. The motors are on the wall, and drive the machinery in convenient groups. This saves wiring and conduit work inside the building. Local natural gas is used for fuel for heating, dyeing and bleaching.

One-half of the building is used for spinning cotton hosiery and underwear yarn; the other half is used for knitting and finishing heavy ribbed and balbriggan underwear. A boiler house was erected on the outside of the building, as was also a brick dyehouse, which is fully equipped with dyeing and bleaching equipment. There is also a shop for covering cotton mill rolls, and for making cases and boxes.

The cotton mill is fully equipped with Saco-Lowell machinery throughout—a 10,000 spindle spinning equipment for making coarse and medium fine yarns—with Foster Machine Company winding equipment. Conditioning equipment for yarn was installed by the C. G. Sargent's Sons Corp.

The underwear plant has approximately 100 knitting machines; Scott & Williams latch needle, and Tompkins spring needle machines. It is also equipped with Payne winders, Davis & Furber napper, and Eastman cutting machines. There are approximately 200 sewing machines, with presses, etc.

Routing the Work

The routing of the work in process is unusual. From the opening of the cotton it follows one process after another down one side of the room. The finished yarn is then wound and knit and the fabric napped, cut finished, and packed, the material reaching again the front of the building ready for shipment. All operations have taken place in one room, saving all trucking, elevators, etc. The plant has both Missouri Pacific and St. Louis Southwestern Railway switch tracks alongside the building.

The knit goods are marketed under the brand of "Arkansas Knit," with a slogan "From Cotton Field to Wearer," emphasizing economy. Local cotton is used entirely, and the largest market is in the heart of the Southwest. The building was remodeled and the machinery installed under the direction of Leroy A. Beers, treasurer and general manager.

Stehli Silks Corporation

New Throwing Unit at Waynesboro, Va., Designed for Future Enlargement—Steel Frame Construction

By D. Elwell

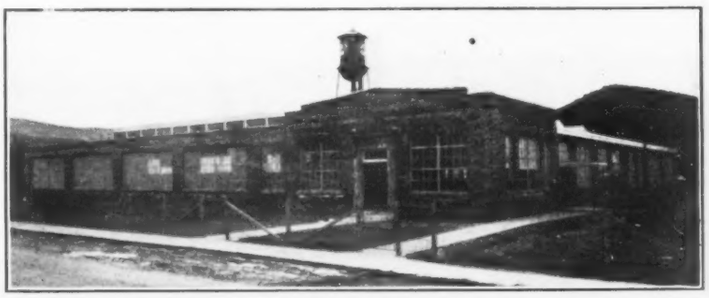
Lockwood, Greene & Co., Engineers, New York

THE Stehli Silks Corp. have recently put into operation at Waynesboro, Va., a model silk throwing unit in a building erected and equipped in 1925. The plant is on the Jefferson Highway in the valley of the Shenandoah. The building is one story and part basement, being 147 by 158 ft., with basement 52 by 147 ft. There is a natural slope downward to the ground from the street on which the plant faces, bringing the main floor at the street level and the basement at the yard grade in the rear of the building.

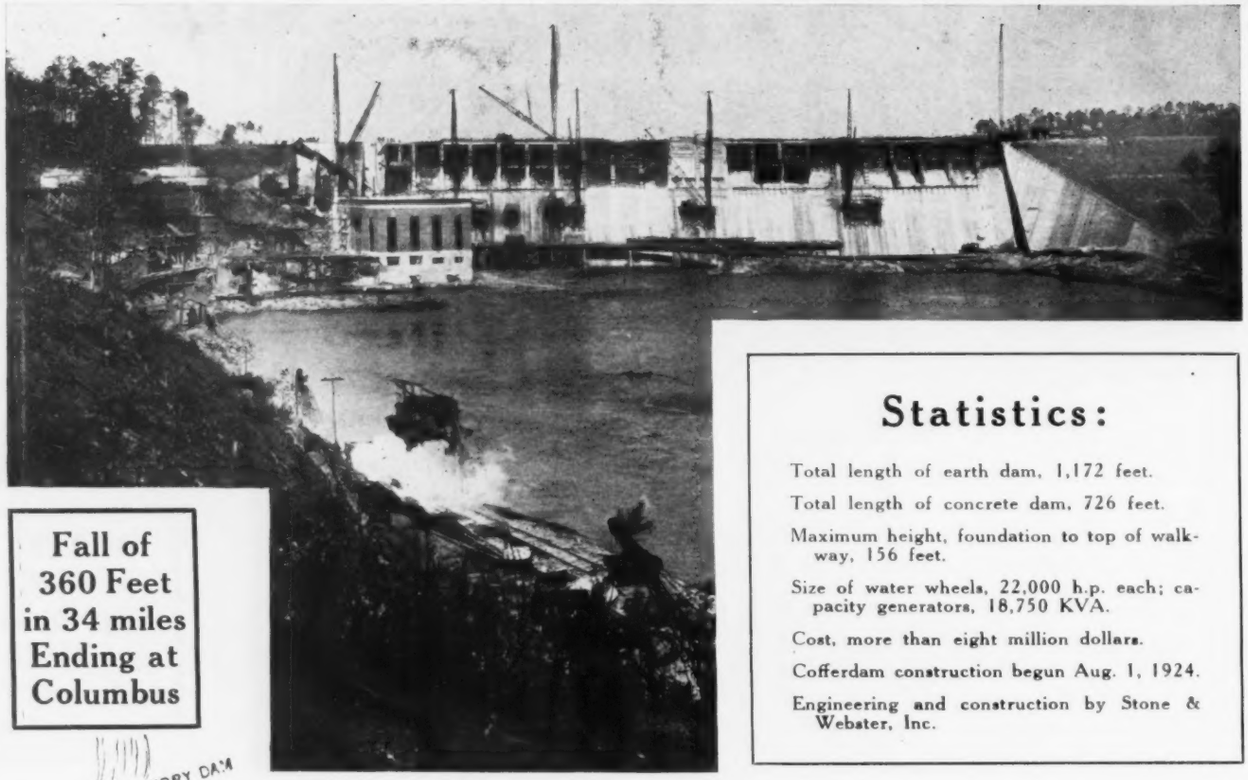
The new mill is of steel frame construction with brick walls, the street frontage being of face brick. The roof is sawtooth, of plank construction on steel frame with Barrett twenty-year bonded roofing. Steel sash is used in the side walls and sawtooth construction. Column spacing is 24 by 26 ft., permitting a very efficient arrangement of machinery. The main floor is a supported floor on steel framing throughout, with pine underflooring and maple top. The basement floor is concrete, cement finish.

Throwing machinery and offices occupy the entire main floor and the basement comprises silk and transformer vaults, both a fireproof construction, boiler room and soaking room. Electric power is purchased and the boiler plant, consisting of two Kewanee locomotive type boilers and self-supporting steel stack, furnishes steam for heating and process requirements.

The mechanical equipment, including electrical work, ventilation, sprink-



New Throwing Mill of Stehli Silks Corp., at Waynesboro, Va.



Fall of 360 Feet in 34 miles Ending at Columbus

Statistics:

Total length of earth dam, 1,172 feet.

Total length of concrete dam, 726 feet.

Maximum height, foundation to top of walkway, 156 feet.

Size of water wheels, 22,000 h.p. each; capacity generators, 18,750 KVA.

Cost, more than eight million dollars.

Cofferdam construction begun Aug. 1, 1924.

Engineering and construction by Stone & Webster, Inc.

Ultimate Capacity

80,000 h. p.

THE Bartlett's Ferry dam and power plant is now in operation at half capacity — more than doubling the power resources of the Columbus Electric & Power Company, greatly increasing the storage of water against low stages of the river and improving the operation of all dams below.

We supply power for all but two of the more than a hundred diversified industries of Columbus — and these two are partly supplied — and for EVERY COTTON MILL within reach of our transmission lines.

Write us for information as to industrial opportunities at Columbus.

Columbus Electric & Power Co.

Columbus, Georgia

West Point—LaGrange—Hogansville—Newnan

Under Executive Management STONE & WEBSTER, Inc.

lers, heating and plumbing is modern and of the highest class. A steel sprinkler tank and tower is of the proper size and location to serve a future enlargement of the plant, in preparation for which a temporary wooden end is provided on the easterly end of the building. The work involved in the construction of the plant included complete sewage disposal system and roadways.

Lockwood, Greene & Co., New York, were engineers-architects for the work, which was executed by the following contractors: Building construction, Grier-Lowrance Construction Co., Statesville, N. C.; heating and boiler plant, Charles W. Christian, Charlotte, N. C.; sprinkler installation, Rockwood Sprinkler Co., Charlotte, N. C.; sprinkler tank and stack, R. D. Cole Mfg. Co., Newnan, Ga.; and humidifiers, The Bahnson Co., Winston-Salem, N. C.

Hanes Dye & Finishing Company

Plant Established at Winston-Salem, N. C., for Bleaching, Dyeing and Finishing Cotton and Rayon Piece Goods

By Bowman S. Atkins

Lockwood, Greene & Co., Engineers, Charlotte, N. C.

AN echo to the demand from the textile trade for variety and originality in the cotton creations of the South is heard from the Hanes Dye & Finishing Co., bleachers, dyers and finishers, who, during the last year, have put a new plant into operation at Winston-Salem, N. C. Quite in accord, too, with the widespread industrial development of the South by southerners themselves has been the promotion of this new industry. The cry of converters of cotton goods for facilities which would enable them to place a finished product on the markets of the East and Middle West, direct from the South, has also been answered by the convenient location of this plant at a point where goods may be processed in direct transit from the mills of the South to the country's great centers of distribution.

With a most complete and flexible installation of bleaching, dyeing and finishing machinery, this firm is now furnishing a custom service to both buyers and makers of cotton and rayon piece goods. The fabrics of the South may arrive in the northern markets in a wide range of colors, finishes and packings; the colors may be fast or not as desired, and of vat, sulphur, mineral, or direct varieties. A separate department pays particular attention to the packing and marking of the materials in process. The new plant is finishing goods in widths varying from 18 to 60 in. Aside from the ordinary run of custom finishing service, the Hanes Dye & Finishing Co. is offering clients several finishes of their own device, including water-repellent treatment, etc.

Plant Layout

The plant is laid out to obtain the maximum continuity of process with the object of giving the trade service as well as quality and uniformity in the handling of goods. Nothing but the best of equipment has been provided in this new plant. All textile machinery was furnished and installed by the Textile Finishing Machinery Co., Providence, R. I. It is all individually and electrically driven, the motors for this purpose being furnished by the Crocker Wheeler Co., Ampere, N. J. For continuity of process the various machine units have been assembled in a great variety of train drives; the electrical controls and the apparatus providing the necessary variations in machine speeds were provided by the Cutler Hammer Co., Milwaukee.

For the necessary process heat and steam a very flexible boiler plant was laid out. The boilers themselves were furnished by the Ames Iron Works, Oswego, N. Y. Feed-water pumps are from the Union Steam Pump Co. A great variety of tanks for the preparation of sizing, fillers, dyestuffs, and chemicals is in evidence throughout the plant. Cypress tanks were suppiled by the A. T. Stearns Lumber Co., Neponset, Mass. Metal tanks were supplied by the R. D. Cole Mfg. Co., Newnan, Ga. The equipment, the building itself, and the surrounding grounds have all been laid out with the object of large expansion as the demands of the trade require.

Shipping Facilities

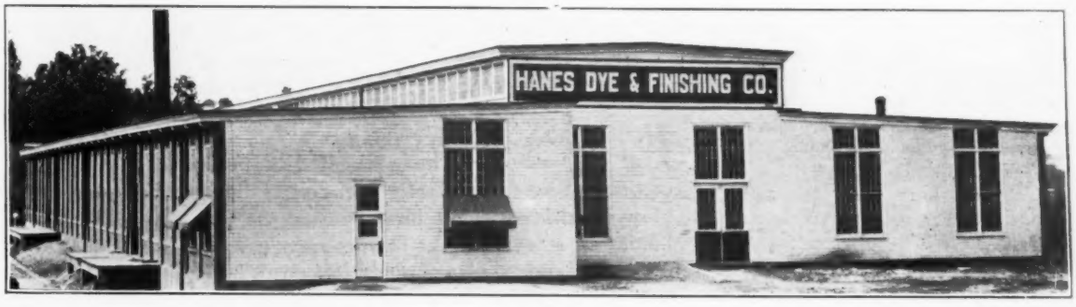
The location of this plant on the main line of the Southern Railway, with local switching connections to the Norfolk & Western and the Winston-Salem Southbound Railway, assures clients of the Hanes Dye & Finishing Co., of rapid transportation facilities to New York, Boston, St. Louis, Chicago, etc. Freight rates through Winston-Salem are incidentally of the best, this being one of the important industrial centers of the South, there being located here some of the largest tobacco, furniture, clothing, and cotton industries of the world.

The manufacturing building itself is a one-story structure with "daylight" walls, brick pilasters, wood sash, columns and roof, and a concrete floor, all designed for permanence, utility, and expansion. It is equipped with the most modern fire-fighting facilities and conveniences for the health and welfare of employes. In line with the present day tendency to prevent or retard decay of timber in industrial buildings, all wood columns, beams, roof plank, and wood sash was treated with a powerful preservative. The floor of the mill, being essentially an area for the receipt, shipment, and other trucking of goods, was laid with great care and of special materials provided by the Kalman Floor Co., Chicago, according to their own specification, developed to produce a very high grade, long life granolithic finish.

One outstanding and very satisfactory feature of this job was the successful installation by one contractor, the Kester Machinery Co., of Winston-Salem, of a great mass of the auxiliary equipment, including not only the lighting and power wiring, the installation of motors, generators, switchboards, and Cutler Hammer controls, but also the process piping, heating, boilers, stack, pumps, heaters, etc. The concentration of this work in the hands of a single contractor greatly simplified the purchase and installation of this equipment and lent itself admirably to fixing the responsibility for the successful operation of the plant upon completion. The building was erected by T. C. Thompson & Bros., general contractors, Charlotte, N. C. All of the work was done under the supervision of Lockwood, Greene & Co., engineers, through their office at Charlotte.

Plant Organization

Men who have spent a lifetime in the various ramifications of the finishing trade are in charge of the different mill departments. The plant was conceived and is operated by Herman A. Jolitz, who has had long experience in the dyeing and finishing business in this country. The management of the new firm includes several successful manufacturers who have been prominently identified with the textile industry. Hugh G. Chatham, president, is also president of the Chatham Mfg. Co., manufacturers of woolen blankets. James G. Hanes, vice-president, is also president of the Hanes Hosiery Mills, manufacturers of ladies' hose. R. P. Hanes is secretary and treasurer, and William Fish is the New York representative, with offices at 320 Broadway, New York.



New Plant of Hanes Dye & Finishing Co. for Processing Cotton and Rayon Piece Goods

John Zimmermann & Sons, Inc.

Build New Plant in Philadelphia for the Manufacture of Plushes—Machinery Moved from Old Quarters

JOHN ZIMMERMAN & SONS, manufacturers of plushes, Philadelphia, have been renting space for their factory since their organization in 1919. In December, 1925, they completed at Kensington Avenue and N street, a new plant. Practically all their machinery was moved from the old location to the new building. In addition, they are adding to their loom equipment and finishing and dyeing machinery, so that they will have a greatly increased output. Within a short time, they will have fifty looms in operation, with sufficient dyeing and finishing machinery to handle the output of two shifts of weavers. All machinery is driven by individual motors, except a small group in the machine shop.

The new mill is a good example of the most modern type of reinforced concrete industrial plant. It consists of a four-story main building of concrete construction, a dyehouse of brick and wood trusses, and a brick and steel boiler plant. The main building, 63 ft. wide and 184 ft. long, is of the flat slab concrete type, four stories in height with ceilings of 16 ft. 3 in. in the clear. This height of floor, with the modern rolled steel sash used throughout, affords the very finest light and ventilation obtainable. David Lupton & Sons furnished the steel sash for all the new buildings.

The primary consideration in the design and arrangement of this plant was that the utmost efficiency should be obtained in the processes of manufacture. The upper floors are laid out for the preparatory operations and the weaving of plush, and the first floor for finishing, packing and shipping. A high speed freight elevator, 12 by 15 ft., with a capacity of 8,000 lbs. serves all of the floors of the main

A $250,000 Expression of Good Will Toward Industry

IN describing the many things Georgia offers manufacturers of various lines we have repeated the statement that in this section is found a perfectly friendly relationship between employer and labor. We have stressed the fact that in Georgia labor has a high respect for property rights and that the tradition of generations compel a fair day's labor for a fair day's pay.

We have told you a good deal about the friendly public attitude toward industry. The people here want your factory; they want your employees. A tangible expression of their welcome is shown in the fact that Atlanta in three days' time oversubscribed a fund of $250,000 with which to advertise the industrial advantages of Atlanta and the Atlanta trade territory.

In Atlanta and in Georgia there is more than a friendly public sentiment, more than a plentiful supply of contented labor. There is raw material of many kinds, a climate without extremes of heat or cold and ample transportation facilities. There is hydro-electric power in quantities sufficient to make 958,000 horsepower available fifty per cent. of the time and 572,000 horsepower available ninety per cent. of the time. We, ourselves, have storage facilities large enough to enable us to furnish an uninterrupted supply of hydro-electric power for ninety days without a drop of rain.

Georgia Railway *and* Power Co.

ATLANTA

New Plant of John Zimmermann & Sons, Inc., Philadelphia

building, as well as the shipping department.

Connected to the main building is the dyehouse, 80 by 89 ft., of brick and timber construction. This dyehouse is equipped with a steam removal system installed by the Atmospheric Conditioning Co., consisting of a large motor-driven fan, blowing air drawn from the outside through a system of heating coils and a system of ducts to various parts of the building. This fan is capable of changing all of the air in this building every one and one-half minutes. The monitor and the roof are specially designed to take care of this air change, being equipped with double sash, approximately ten inches apart, so arranged that the air is blown to the top of the monitor, then down between the sash to the outside. This system, in conjunction with the double sash, eliminates the condensation and dripping usually found in dyehouses.

The boiler plant, of brick and steel construction, houses two Babcock and Wilcox water tube boilers, fired by three retort Taylor automatic stokers. These boilers generate steam at 200 lbs. The coal is stored in a 75-ton concrete bunker below the boiler and is handled by a monorail system and bucket. The ashes, through a steam jet conveyor, are blown into a 12-ton hopper on the outside of the building. In this building is also located a Permutit water softener of 100,000 gal. capacity. Wm. Steele & Sons Co., designed and built this new plant.

Weave Shed for Aldrich Bros. Co.

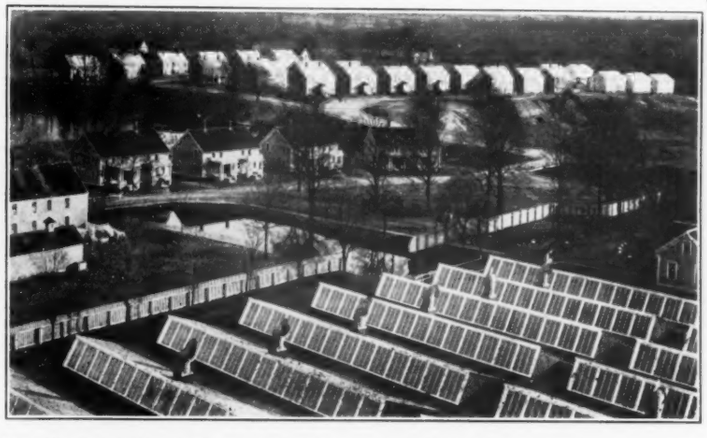
Additional Space for Looms to Balance Equipment—New Housing Development

ONE of the results of the prevailing use of rayon by the cotton goods manufacturer is the unbalancing of plants that have in the past been devoted entirely to the use of cotton, and have been designed to be properly balanced as to spinning and weaving. This is true of the plant of the Aldrich Bros. Co., at Moosup, Conn., and to correct this unbalancing that has been brought about by the large use of rayon they have recently erected an addition to their weave shed.

The addition is a sawtooth roofed structure about 181 ft. wide by 192 ft. long, of modified mill construction, using steel columns, floor beams and main rafters, with plank floors and roof. The greater part of the building has a 6-ft. basement for shafting, etc. A portion of the basement, about 50 by 171 ft., having about 14 ft. head room, is to be used for the machine shop, in addition to this building and joined to it there has been built a new slasher room, about 85 by 90 ft., in which will be installed seven slashers. The size kettles and starch storage for these slashers will be located in the basement directly under the slashers.

The weave room floor consists of steel beams, hard pine spiking pieces, 4 in. grooved plank; 1 in. intermediate flooring on the diagonal, and matched maple top surface. The new looms are Crompton & Knowles make. There are two new Saco-Lowell slashers, and five old Saco-Lowell slashers in the new slasher room. These have all been provided with a modern fan ventilating system and a modern size circulating system. Humidifiers are the high duty heads furnished by the American Moistening Co. All machines are belt driven, shafting being driven by motors.

The entire roof of both buildings has been insulated to save heat loss, and to prevent condensation, by a one inch air space and one ply of creosoted inch boards. A waterproof membrane has been laid between the plank roof and this insulation, and a tar and slag roof has been applied on top of the insulation. There are 22 double damper rotating cowl ventilators.



New Weave Shed and Housing Development of Aldrich Bros. Co., Moosup, Conn.

Village Additions

The erection of this building has necessitated further additions to the housing development. Practically all of the employes of the concern live in houses owned by the company and one two-family eight-room house and five four-family four-room houses have been added to the present village, a view of which is shown.

F. P. Sheldon & Son, engineers and architects, Providence, R. I., are responsible for the design, equipment and supervision of erection of the weave shed and village. The construction work has been carried out by the Aldrich Bros. Co., under the direct supervision of Harry Richardson, agent, and his master mechanic, C. H. Pepler.

New Dyehouse for Silk Company

Built in Connection with Remodeling of Former Powhattan Mill Property—Construction Features

A NEW dyehouse for The H. K. H. Silk Co. (Belding-Heminway Corp., successors), at Putnam, Conn., was built in connection with the remodelling of the former Powhattan mill property, which was purchased in 1924, to enable the consolidation of the two plants that the company was operating in Putnam. The dyehouse was completed in the spring of 1925. An addition to the main mill was also built at the same time for vaults for raw and finished silk and for a mill office.

The land area available for the dyehouse was exceedingly restricted. The dyehouse was located at the rear and at right angles to the main mill, to which it is connected by an enclosed passageway about 26 ft. long; adjacent to a storehouse and garage on one side for half of its length, 26 ft. from the boiler house, and 24 ft. from the Quinebaug River at the nearest point. Although the location was not ideal for obtaining a maximum of daylight, it had economic advantages.

Construction Details

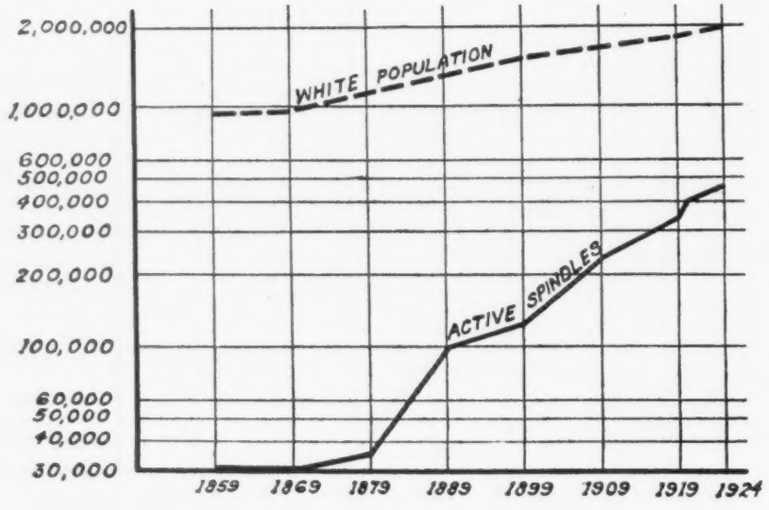
The longitudinal axis of the dyehouse is northeast-southwest. The dyehouse is arranged for hand tub dyeing of yarn, both black and colors. The building is 104 ft. long and 53 ft. wide, one story high with monitor-type roof, with a mezzanine 30 ft. long by the width of the building at the end nearest the mill. The structure is, in general, of mill construction; the foundations are of reinforced concrete; the walls of brick; and the trusses, roof and mezzanine floor of heavy timbers and plank. There are no interior columns, except under the mezzanine, the roof being carried on trusses spaced 10 ft. on centers. The height to the bottom of the truss is 17 ft., and the truss is 13 ft. 9 in. high at the center.

The mezzanine floor framing is of steel, steel being used to eliminate columns that would interfere with apparatus. All timber and plank were treated with a preservative to prevent dry rot.

In order to obtain as much natural light as possible, the truss piers were reduced to minimum dimensions, and spaces between entirely filled with windows. The window frames are of wood and are about 7½ ft. wide by 14 ft. high, and have ventilator sections top and bottom, the center portion being stationary. The sash are double glazed with ribbed and clear glass to minimize condensation.

The sloping portion of the roof is of 4 in. spruce plank, covered with an insulating quilt, and asbestos shingles. The monitor is 12 ft. wide and 5 ft. high, and has a flat roof of same construction as above, except that the roof covering is pitch and gravel instead of shingles. The monitor sash are continuous top hung, and gang operated in three sections on each side. The monitor sash is controlled from the mezzanine and main floor levels.

The main floor has a reinforced concrete base, and is covered with a vitrified acid-proof brick-size tile. The finished floor of the mezzanine is of maple. Communication between the main and mezzanine floors for persons is by stairway and goods are car-



COTTON SPINDLES

Massachusetts	10,800,000
Rhode Island	2,740,000
New Hampshire	1,270,000
Connecticut	1,240,000
Maine	1,120,000
Tennessee	468,000

SPINDLES IN RELATION TO POPULATION

State	Population	Spindles per Capita
Rhode Island	645,000	4.25
New Hampshire	455,000	2.79
Massachusetts	4,150,000	2.60
Maine	780,000	1.44
Connecticut	1,540,000	.81
Tennessee	2,000,000	.23

Figures are estimated for 1924 Population of Tennessee covers white people only.

Tennessee's Labor Supply has Scarcely been Touched

Labor—a most important factor in the textile industry, today—is abundant in Tennessee. The same character of native white workers of Anglo-Saxon extraction that have made the Piedmont section of the Carolinas a thriving textile district is found throughout Middle and East Tennessee.

The chart shows the textile development of Tennessee since 1859 with the gain in white population for the same period, while the figures in the accompanying table conclusively prove that this state's supply of textile labor has scarcely been touched. As a matter of fact, the figure of .23 spindles per capita is the lowest for any of the recognized southern textile states.

Aside from labor, Tennessee possesses other necessary requisites for successful manufacturing enterprises — climate, raw materials, transportation, power. Already close to 150 textile mills are successfully operating here, and there are numerous localities that offer favorable inducements for further expansion of the industry.

Write us about labor conditions and other information concerning Tennessee or address Secretaries of local Chambers of Commerce.

What Tennessee Offers

1. Ample supply of native white labor.
2. Ideal climate the year 'round.
3. Cotton from Tennessee and adjoining states.
4. Satisfactory transportation facilities.
5. Location in the center of Southern markets, and within easy access of others.
6. Favorable construction conditions—land, material costs, taxes.
7. Adequate banking facilities.
8. Cheap power with the supply well in advance of requirements.

The Tennessee Electric Power Co., Chattanooga, Tenn.

Build Your Mill in TENNESSEE

ried by a dumb-waiter. The main and mezzanine floors of the dyehouse are at the same level as the basement and first floors of the mill, respectively.

A locker room, shower room, toilet and washing facilities are provided for the employes. All fixtures for washing and laboratory use are acid-proof porcelain. Drinking water is provided through fountains arranged to be easily accessible.

Storage of dyes and other supplies is provided for in the adjoining storehouse. A laboratory and superintendent's office are located in the north corner, a window being placed in the corner at an angle to obtain direct north light and avoid reflections from surrounding buildings, objectionable for matching colors.

Arrangement of Equipment

The apparatus is of the usual type for hand tub dyeing. Color dyeing tubs are located along the northwest side which has the better light; black dyeing is on the opposite side. The apparatus also includes one black dyeing machine and one boil-off machine, extractors which are located near the dumb-waiter, and other miscellaneous equipment incidental to this process. Soap tanks and dryers are located on the mezzanine floor. Provisions have been made for the future installation of dyeing machines in the center aisle between the tubs, which would double the capacity of the plant. Each tub is supplied with steam, hot water, cold water, and soap.

Water for dyeing is obtained from the river and is pumped directly into the supply piping to the tubs. Water for domestic use is pumped into a storage tank located in one of the mill towers, and is distributed by gravity.

Water is heated by steam by means of an "instantaneous" heater located in the boiler house directly in front of and over the boilers. The drainage system is arranged to separate the water and dye liquor waste.

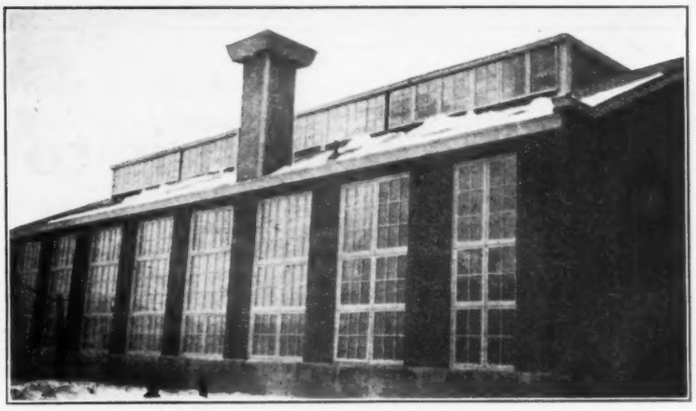
The floor is pitched to drain to two trenches in the center of the dyehouse, between which the future dyeing machines will be located.

Ventilation of Mill

Ventilation is obtained by gravity during the greater part of the year, the shape of the building being designed to facilitate this feature. Control to suit temperature and wind direction is by means of the top and bottom ventilator sections in the side wall sash and the sectional gang operated monitor sash. In addition, there are three large ventilators on the roof of the monitor and ventilator hoods over the boil-off and dyeing machines.

During cold weather the dyehouse is heated and the gravity feature of the ventilation system maintained by a blast hot air heater, which is located in the adjoining storehouse and discharges into the dyehouse.

The dyehouse and the other work incidental to the development of this plant was designed and the construction supervised by Jenks & Ballou, consulting engineers, Providence, R. I., in conjunction with the staff of The H. K. H. Silk Co.



New Dyehouse for H. K. H. Silk Co. at Putnam, Conn.

Davenport Hosiery Mills Enlarge

Add Line of Full-Fashioned Hosiery and Build New Reinforced Concrete Mill at Chattanooga

By W. G. Norteman
Lockwood, Greene & Co., Atlanta, Ga.

IN the early part of 1925, the Davenport Hosiery Mills, Chattanooga, Tenn., manufacturers of "Hummingbird" pure silk hosiery, decided to add to their production a line of full-fashioned hosiery. As there was no room available for additional machinery in their plant they decided to erect a new building which would be used exclusively for the manufacture of full-fashioned hosiery.

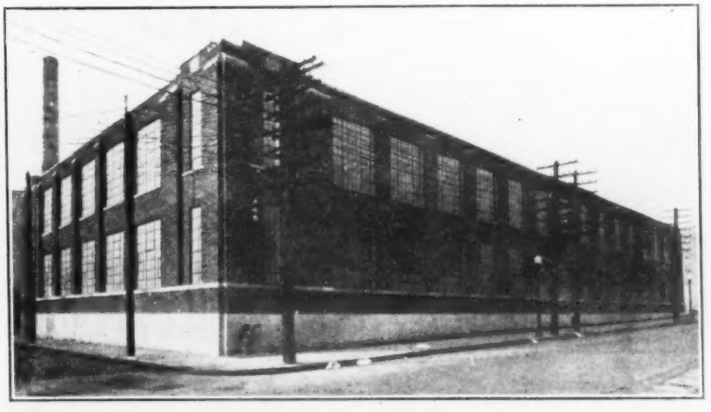
With this object in view a parcel of land at 11th and Clift Sts., Chattanooga, was purchased. This was a very desirable site, located in the heart of Chattanooga and very close to their original mills. Lockwood, Greene & Co., engineers of Atlanta, Ga., were employed to furnish plans and specifications, award contracts, and supervise all work during construction.

Designed for Four Stories

In order to take care of the future demand for "Hummingbird" full-fashioned hosiery a mill 94 by 228 ft., four stories high, was designed. The present development consisted of the construction of two stories, with a small boiler house for a heating unit. The building is a modern fireproof building of reinforced concrete with a rough texture face brick for all fronts. Reinforced concrete columns are spaced 14 by 31 ft., and floor construction is of concrete beam type with clay tile and concrete ribbed slab, plastering the tile on underside for a finished ceiling. On the concrete slab is laid 1 in. of tarred sand into which is bedded a 2 in. creosoted plank, then a 1 in. intermediate floor and a 1 in. maple top.

The contract for the building construction was awarded to Mark K. Wilson Co. of Chattanooga, who started work on June 22, and completed the building on December 1. It is the intention of the owners to install knitting machinery throughout both floors and at this time twenty-two Ludwig full-fashioned machines are being installed. All machines are individually motor driven by power purchased from The Tennessee Electric Power Co.

Cooper Hewitt lights have been installed throughout by the J. M. Clayton Co., Atlanta, who have also installed all power and light wiring. The heating, plumbing and sprinklers were furnished and installed by Fred Cantrell Co., Inc., Chattanooga, Tenn.



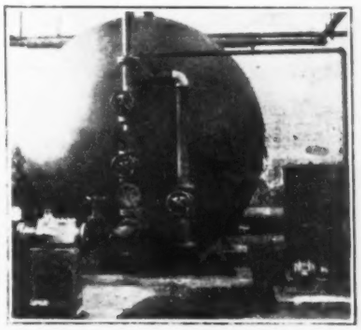
New Full-Fashioned Hosiery Department of Davenport Hosiery Mills

Water Softener Installed

Inversand Equipment at Silk Dyeing Plant

The Standard Silk Dyeing Co., Inc., Paterson, N. J., has recently placed in operation an Inversand water softener, built by Hungerford & Terry, Inc., Clayton, N. J. This installation, shown in the accompanying illustration, has a capacity of 13,800 to 18,300 gallons per hour, the specifications calling for a capacity of 138,000 gallons in 10 hours. The equipment shown, it is stated, will reduce to zero hardness 306,000 gallons of water in one regeneration, the time consumed being from 30 to 40 minutes, in the regeneration process.

This installation is only one of many important ones in leading textile mills throughout the country within the last six months, of the Inversand



Inversand Water Softener Installation at Plant of Standard Silk Dyeing Co.

water softener. It is just six months since Hungerford & Terry, Inc., announced in these columns that after four years' trial of a natural zeolite, which they had discovered, they were prepared to place the Inversand water softener upon the market. Within that period, after investigating the results obtained by the equipment installed at the plant of Boger & Crawford, Philadelphia, the new National Yarn & Processing Co., Rossville, Ga., installed an Inversand softener with 500,000 gallon capacity; the Revolution Cotton Mills, Greensboro, N. C. installed a 3,000,000 gallon softener to soften the water from a filter plant installed by Hungerford & Terry, Inc., 15 years previously; the Proximity Mfg. Co. placed an order for a 200,000 gallon softener; the new Belmont (N. C.) Processing Co. an order for a 1,000,000 gallon softener., while the Franklin Process Co., Chattanooga, Tenn., also ordered one.

In the silk industry the installations include, in addition to that of the Standard Silk Dyeing Co. Inc.: The National Silk Dyeing Co., Paterson, N. J., 350,000 gals.; the Consolidated Silk Dyeing Co., and the Imhoff-Berg Silk Dyeing Co. from 400,000 and 550,000 gallons per day. Several Canadian installations are also noted. The above installations, including the largest plant in the South for water softening, would seem to indicate the Inversand water softener has been approved by textile manufacturers.

The South is to lead henceforth

"THE surplus energy and capital of the nation, at the climax of their power and volume, have suddenly turned en masse to the exploitation of the South. They are so vast and so well equipped with tools, machinery, organization, science and experience that the industrial progress of the South in the next decade will be the greatest industrial wonder of a nation whose history abounds in industrial marvels. The so-called Florida boom is in a sense merely the fanfare of trumpets proclaiming the debut of an amazing spectacle of material transformation."

This is an extract from a letter written by one thoughtful business man to another, quoted in the Manufacturers Record. It should set manufacturers to thinking.

What are YOU doing to occupy this field, to fortify yourself in what will be the greatest field of progress?

The New Industries Committee of the Columbus Chamber of Commerce is an organization composed of heads of big enterprises who will treat a letter from you as strictly confidential and render you real service in working out your ideas of expansion in the South.

Pictures from the South's Oldest Industrial City

—this is the title of a folder which pictures about forty of the largest industries of Columbus, most of them taken from the air and giving a clear understanding of their extent and surroundings. It is interesting in the extreme to an industrial man. Write for a copy.

Columbus Offers Industry—

Dependable hydro-electric power
Reliable native-born labor
No labor disputes or strikes
Big surplus supply of cotton
Coal, iron and timber handy
Rail and River transportation
Very low building costs
Pure, soft river water
Absolute freedom from malaria
Pure drinking water supply
Plenty of low rental houses
Efficient street transportation
Fine churches and schools
Bonds voted to pave all main roads
Friendly public sentiment
Mild winters and summers

Five Years Tax Exemption

You may write us for information in confidence that no publicity will result from your inquiry.

New Industries Committee
of the Chamber of Commerce

P. O. Box 1220

COLUMBUS, GA.

Wool Combing Plant in Successful Operation

Branch River Wool Combing Co. at No. Smithfield, R. I., Quickly Reached Capacity Production—Continuity of Layout and Many Mechanical Improvements Make Plant an Unusually Interesting One—Making Both Dry and Oiled Tops on Commission Basis

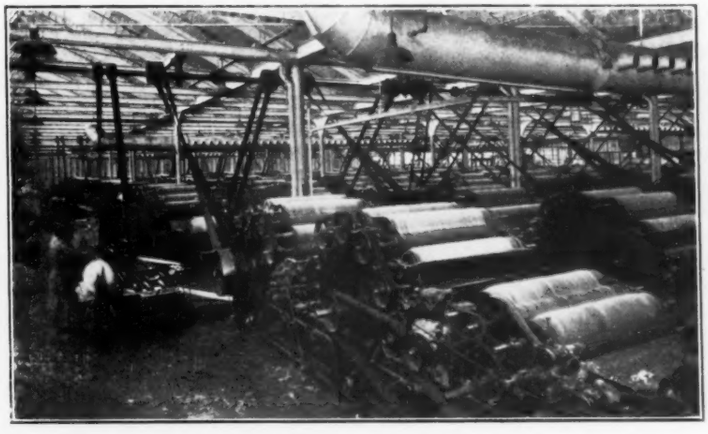
ONE of the outstanding new textile enterprises which got into operation in 1925 was the Branch River Wool Combing Co., with plant at North Smithfield, R. I., one mile from Woonsocket. This plant, which was described as under construction in last year's Annual Issue of TEXTILE WORLD, started operations on February 15, 1925, only 10 months after the first steam plow started to clear the land.

Although organized by the Anciens Etablissements Amedee Prouvost & Cie., of Roubaix, France, which incidentally is the largest firm in the world devoted exclusively to wool combing, the Branch River Wool Combing Co. is an American company incorporated under the laws of the State of Delaware. The plant at North Smithfield is operated almost entirely by Americans.

The company, on its present basis of two shifts, or 88 hours per week, has a weekly capacity of over 100,000 lbs. of tops but can produce at least 150,000 lbs. by changing to a three-shift basis. Its operations are exclusively on a commission basis.

Although the production at the start was confined to the manufacture of dryed combed tops for French spun yarns, it has been extended to include also oiled tops for Bradford spinning. Incidentally it is also true that the French parent company, with its output of over 500,000 lbs. weekly, has concentrated particularly on dry tops but has produced at its various plants, large quantities of tops for Bradford spun yarns—and enjoys close connections with Bradford spinners. The French concern has been in business for 75 years.

That the company appreciates the importance of first impressions is indicated by the unusually attractive offices located at the main entrance at the north end of the principal building. These have been planned with great care and ample provision has been made for the reception of visitors. The combination of natural-finish oak trim, plate glass partitions and floors covered with battleship linoleum has made these offices far more beautiful than the executive department of the average mill. Furthermore their attractiveness is maintained by a meticulous attention to cleanliness which, incidentally, extends to every department of the plant.



Card Room of Branch River Wool Combing Co.

Storehouse Building

In addition to this feature of cleanliness, the effective continuity of operation secured at the plant is an outstanding characteristic which impresses a visitor to North Smithfield. Means have been provided for the mechanical passage of the product from one department to another, with a minimum of labor involved. Furthermore, the various departments have been planned so that there is no "back tracking" of the product at any stage of the operations.

Starting with the storehouse, one of the two principal buildings of the plant, this structure is three stories and basement, 95x169 ft., of reinforced concrete construction. The incoming wool is received on the platform extending along the first story level and adequate for the unloading of five cars at one time. This receiving floor is laid out in an interesting way, each of the pillars being numbered and all the numbers facing the scales. The weigher, after weighing the incoming lots of wool, directs them to the proper pillar for future handling according to the specifications of the individual order.

The wool is transported either to the basement for storage or by elevators to the top floor where it is sorted. This sorting room is admirably adapted to the purpose, being equipped with all glass sides and sawtooth skylights providing a maximum of light.

The sorted wool passes through holes in the floor by gravity to the second floor, whence it is transported to the right or to the left over two bridges which connect the storehouse with the main manufacturing building.

The Principal Building

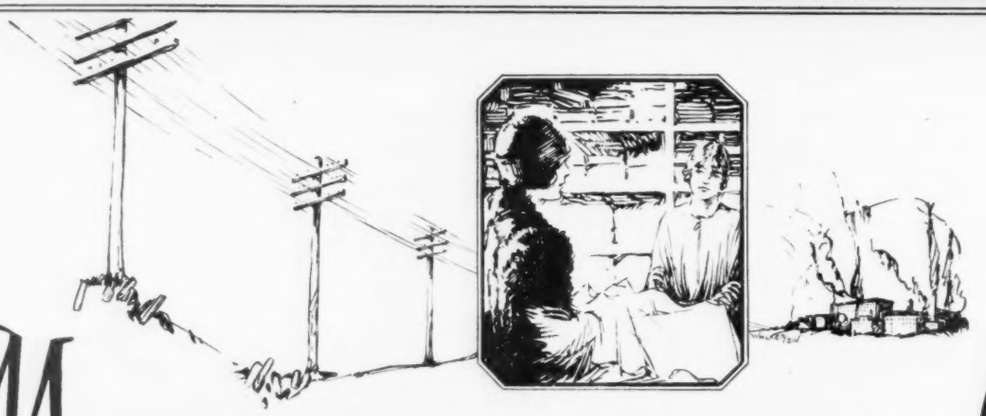
The latter is a one-story and basement structure, 393x238 ft., of flat slab reinforced concrete construction, with sawtooth roof.

The wool, passing over the bridges, goes to small rooms in an elevated structure over the main floor of the principal building and is dropped by gravity directly into the scouring bowls, located at the south end, adjoining the storehouse. The present equipment includes three columns of scouring machines, with, however, several incorporated features developed by the Branch River Wool Combing Co. The wool from the delivering end of the scouring machines is blown up through two overhead towers and down through chutes to the card room. This room contains an equipment of 72 cards, designed and assembled by the French parent company. The card waste is dropped by chutes to the basement.

The combing department adjoins the card room and comprises 54 Lister combs of special design, built in France to meet the company's specifications. Next comes in order the finishing department which includes, among other equipment, a top baling press, furnished by the Franklin Machine Co. of Providence.

Miscellaneous departments of the plant include an extensive machine shop for development, construction and repair work; washrooms and locker rooms for male and female employes; an employment department where all records of operatives are kept and where help is engaged; a special enclosed depart-

Front View of Branch River Mill Taken from Main Highway



Merchandise By Wire!

the order of Modern Selling

THIS country has developed beyond the point of patience with long-haul selling methods. The merchandising groups have changed their policies; the producing groups must do likewise—or quit!

No longer can the producer sit many hundreds of miles from his markets, demand six-months delivery datings, and hope to succeed in the face of competition with its branch plants intelligently placed, its salesmen an overnight jump away.

Look at the Textile Industry, the Shoe Industry—and others. Industry is decentralizing. Sections are being served from close by—and can never again be satisfied with the old long-range methods.

560 nationally known organizations already are serving the South from Atlanta.

Some with branch offices, warehouses, assembly plants —and a number with full-blown factories, busily working to satisfy the needs of a waiting market.

Atlanta is the financial and transportation center of an area that is rich in resources, and growing amazingly. Here industry finds economies in labor, power and raw material costs which no business man can afford to ignore.

Get the facts! The Industrial Bureau of Atlanta is prepared to supply complete and detailed data on which industry can base its decisions. Not a cut-and-dried mass of statistics, but a special, confidential survey—made in each case specifically to answer the questions of each separate company that is interested.

Ask for a special report for your business.

Write to the INDUSTRIAL BUREAU
Chamber of Commerce

Atlanta Offers YOU

TRANSPORTATION — Eight strong railroad systems. A semi-circle of ports with adequate coast-wise and export shipping.

LABOR—intelligent, adaptable Anglo-Saxon people, free from the unreasonable attitude which elsewhere has so seriously hampered production and raised costs.

RAW MATERIAL—25 of the 26 industrial minerals in commercial quantity. Cotton, Lumber and other important materials are all close by.

POWER—Hydro electric lines serving the area at rates lower, with two exceptions, than any other part of the United States.

FUEL—Coal, fuel oils, and wood in good supply at moderate prices.

WATER—Soft, and useful in its natural state.

SITES—Plentiful locations on railroads, accessible to Labor, Power, Water, etc.

WAREHOUSING — Adequate space, well located for reshipment or city delivery.

FINANCIAL RESOURCES — Headquarters Sixth Federal Reserve District. 23 Banks and Trust Companies with resources more than two hundred millions.

OFFICE FACILITIES—Plentiful supply. Rents moderate. Many modern buildings.

COST OF LIVING—Estimated by National Industrial Conference Board 7.5% below average for the country. One of the seven low cities in this respect.

SOCIAL ASPECTS — Schools, churches, hospitals, parks, playgrounds and all recreation excellent. Famous as a sport center— Golf, etc., City of trees, lawns and open spaces.

CLIMATE—Altitude of 1050 feet above Sea Level makes for health. No extremes of heat or cold.

No State Income Tax
No State Inheritance Tax

ATLANTA

INDUSTRIAL HEADQUARTERS OF THE SOUTH

ment for repairing of combs; a chemical laboratory where all materials are tested; and a conditioning room.

Equipment Details

The humidifying equipment in the plant is the Mertz system; the heating and power plant piping was furnished by Parks-Cramer Co.; fire protection by Holyoke Valve & Hydrant Co.; pumps by Worthington Pump & Machinery Corp.; elevators by the Salem Elevator Co.; two 516 h.p. Stirling boilers by Babcock & Wilcox Co.; water filter by the Permutit Co.; oil burning equipment by the Hammell Co.; motors by Westinghouse; boiler settings by George Allen & Sons; boiler flues, stacks and tanks by D. M. Dillon; elevated water tower and fuel oil tanks by Chicago Bridge & Iron Works; plumbing by W. G. Cornell Co.

Details of the boiler plant and water supply system were given in last year's Annual Issue of TEXTILE WORLD. The plant is operated by purchased electric power, but the boiler plant, an oil-burning one, supplies steam for heating and process work—and in addition is adequate for the production of the company's own power at any time desired.

Combing Room of Branch River Wool Combing Co.

An important department of the mill is the wool grease extraction plant which enables the recovery of all but one-half of one per cent. The used scouring liquor is passed into a settling tank, built to specifications, where the impurities settle to the bottom and the grease is drawn off through De Laval separators and finally packed in barrels for shipment and sale.

Mechanical Development

Unfortunately, the writer is forced to omit many of the most important features of this story which have to do with the mechanical developments and improvements worked out by the company itself. Naturally these are the property of the Branch River Wool Combing Co. It can be stated, however, that in practically every department are machines developed by its engineers or devices improved by them. The developments of 75 years of wool combing in France, plus the research work being conducted each year, make the mechanical department of the company one of the most important and effective in relation to the operation of the North Smithfield plant.

Its design and construction were under the supervision of Lockwood, Greene & Co., engineers, of Boston, and the general contractor was the Turner Construction Co. The treasurer of the company is W. G. Higgins, who also has numerous interests in Europe and the Orient.

Expansion of Joanna Cotton Mills

Banna Plant at Goldville, S. C., Purchased by Oswego Shade Cloth Co. and Capacity Increased

By J. C. Hipp

Lockwood, Greene & Co., Engineers, Atlanta, Ga.

IN MAY, 1924, the Banna Manufacturing Co., located at Goldville, S. C., was purchased by the Oswego Shade Cloth Co., of Oswego, N. Y., and the name of the plant was changed to Joanna Cotton Mills. This mill was laid out to manufacture print cloths, and consisted of 352 broad looms and 14,224 ring spindles, with preparatory machinery to balance. Buildings were of the slow-burning mill construction type. The mill operated its own steam power plant.

The new owners immediately started an extensive program of expansion, more than doubling the manufacturing floor space, and adding fifty new operatives' houses to the village. The mill building was extended 250 ft. by 100 ft., two stories; the carding department was widened from three bays to four bays wide; the old picker room was converted into the card room; and a separate one-story building was erected to provide new picker room, cloth room, opener room, waste room, and one section of warehouse. These buildings and improvements are of slow-burning mill construction.

A new mill office was erected, being a one-story brick building and providing the usual general and private offices and a vault.

New Machinery Added

New machinery was added, consisting of 12,096 ring spindles (3½ in. gauge), 2,888 fine roving spindles, 750 intermediate spindles, 192 slubber spindles, 56 deliveries of drawing, 34 revolving flat cards, 5 pickers, 1 bale breaker, 1 vertical opener, and 350 Draper broad looms in 42 in., 48 in., 54 in., and 60 in. widths. The opening, picking, and carding machinery is Saco-Lowell make, and the roving and spinning is Whitin. All this machinery was in operation by the early part of 1925. All the old machinery was rearranged and thoroughly renovated at the time of the expansion. The plant is engaged principally in the manufacture of muslins for window shades, which are shipped to the bleaching and finishing plant of the parent company at Oswego, N. Y.

Plant Electrified

The entire plant was electrified at the time of enlargement. Four-frame motor drives were installed for the spinning and roving; group drive was used on the cards, spoolers, warpers, slashers and old looms; individual motors were installed on the pickers and new looms. Electric current is purchased from the Southern Power Company. A new electric light wiring system was installed throughout the old mill and extensions.

The humidifier system was improved and enlarged by placing new high duty heads throughout the weave room and new copper sectional heads in the spinning room; while the old sectional heads were used in the carding and roving. All buildings are provided with automatic sprinklers, and a complete system of fire hydrants and underground pipes, together with a new motor-driven fire pump, were installed for fire protection. A non-climbable wire fence was erected to enclose the mill buildings and yard.

Village Improvements

The mill village has been provided with all modern improvements. A sanitary sewer system was installed throughout, and an up-to-date sanitary sewage disposal plant, consisting of sedimentation tanks and slow sand filtration beds was built. Plumbing is provided in all houses. The streets were graded, and concrete curbs and gutters built. A system of 6 in. water mains was laid on all streets; a 75,000 gal. steel tank elevated on 75 ft. steel tower was erected; and deep wells drilled to provide water supply. Air lift pumping equipment is used to raise the water from the wells. A complete electric street lighting system was built, and all houses wired for electric lighting.

Considerable acreage adjoining the original tract has been purchased, and the new owners of the mill are taking much interest in the village feature of the property. It is their aim to furnish their employes living facilities and surroundings equal to the best furnished in the South.

In December, 1925, with further manufacturing expansion in view, a contract was let for construction of fifty additional operatives' houses, consisting of 10 six-room houses and 40 four-room houses. All of these are frame construction, varying in plan to gain individuality, plastered inside and weatherboarded with wide boards.

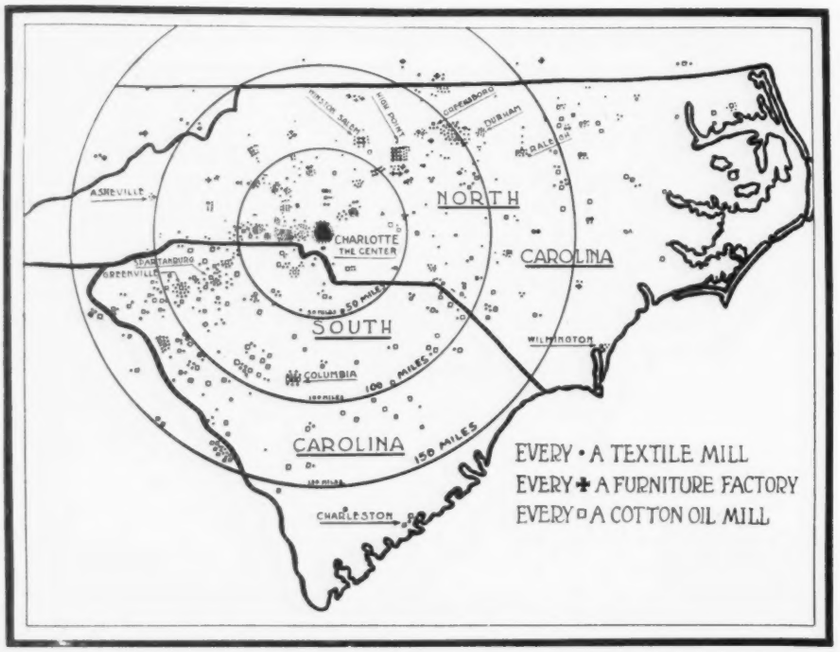
Lockwood, Greene & Co., of Atlanta and Boston, were the engineers. The officers of the Joanna Cotton Mills are: Stewart Hartshorn, president; Harold W. Hack, vice president; and E. L. Durgin, secretary and treasurer. Wm. A. Moorhead is the resident agent.

H. C. Aberle Company

Increase Capacity by Erection of Large 5-Story Mill

A new hosiery mill for the H. C. Aberle Co., has been constructed at A and Clearfield streets, Philadelphia. This building is an addition to the present plant of the company, on the other side of the street, which consists

New Hosiery Mill Addition for H. C. Aberle Co., Philadelphia



The accompanying map graphically proves the dominating location of Charlotte, not only in the textile field, but in Southern industry generally. Within a radius of 100 miles of Charlotte there are more textile mills than in any like area in the world. Charlotte has 75,000 population and every facility for modern business, social life, health, education and prosperity.

Charlotte

The Southern Textile Center

Charlotte, North Carolina, is the textile capital of the South, with 771 mills and 10,000,000 spindles within 75 miles.

Charlotte dominates the Piedmont Plateau, which is the real Southern textile belt.

Charlotte is the home of the Southern Power Company, operating the world's second greatest hydro-electric power system, with a capacity of over 600,000 horse power. Presidents of 28 great textile industries make Charlotte their home.

Hotel and travel facilities, rail connections and a network of improved and paved highways centering at Charlotte make it a most convenient headquarters for working the textile country.

That is why 576 firms doing a national or interstate business have located their industries, branch plants, warehouses or sales offices in Charlotte.

That is why Charlotte is the only city in the South in which a textile mill can be planned and completely equipped by firms having the necessary machinery and materials warehoused locally.

Charlotte's fourteen banks and trust companies, with resources of $60,000,000, can amply take care of new industries and new business houses.

Textile men, builders of textile machinery, representatives of textile supply houses — anybody interested in the textile field and considering Southern location should investigate Charlotte before thinking of any other locality.

CHARLOTTE
The TEXTILE CENTER

WRITE TO CHARLOTTE CHAMBER OF COMMERCE, *Charlotte, N. C.*

of buildings constructed in 1911 and 1920 by the same builders.

The main building of the new mill is 92 ft. wide by 195 ft. 6 in. in length, with a wing 50 ft. 9 in. by 58 ft.8 in., and is five stories in height. It is of the most modern type of reinforced concrete flat slab construction, with the bays 27 ft. 6 in. by 31 ft., so arranged that there will be two lines of hosiery machines running the entire length of the building. This allows a center aisle of 12 ft. which, though located in the center of the building, is amply lighted by a story height of 15 ft. on every floor. The sash are of the rolled steel projected type, insuring the greatest possible light and ventilation and permitting the convenient use of shades on the inside. The spandrel walls are of hollow tile with texture face, making an attractive appearance with the maximum of insulation. The roof of the entire plant is insulated, reducing materially the coal bill and the amount of radiation on the top floor.

The first floor of the wing, also of reinforced concrete construction, houses the boiler plant, consisting of a 300 h.p. Keeler high pressure boiler, fired with oil. The boiler plant is designed for two more boilers of the same type in the future. This boiler provides steam for heating as well as manufacturing. The latest "L" type of radiation is used throughout this building. In this system the radiators begin at a point 2 ft. above the floor on the columns, running up the columns 8 ft., then extend out parallel to the floor a sufficient distance to give the required radiation. Wm. Steele & Sons Co., are the engineers and constructors of this new plant.

Cannon Mfg. Co.

Two New Buildings for 50,000-Spindle Unit

Bids were asked on Feb. 1 for the construction of a new 50,000 spindle unit, involving two buildings, for the Cannon Mfg. Co., Kannapolis, N. C. This will provide for a considerable increase in the production of Cannon towels and toweling.

A three story building, 108 x 696 ft., to be known as Mill No. 7, will be erected, accompanied by a picker building, 84 x 212 ft., also three stories in height. Construction work is expected to start about Mar. 1. The erection of a new power house is contemplated, but decision has not yet been reached on this matter.

The new buildings will be laid out on 20 x 26 ft. bays, and they will be of light steel frame construction with wood intermediate floor beams. A basement under the new Mill No. 7 will be provided, which will be 140 ft. long, running the full width of the building. Mill No. 7 will be connected to the picker building at one end by a three story bridge and by a one story bridge at the second floor at the other end.

The ground floors of both buildings will be on tar rock foundations. The upper floors will be heavy plank with maple finish. Industrial steel sash will be used throughout. Full length monitors will be on both buildings, and steel top hung sash will be used in the monitors. A dust chamber will be provided under the entire picker building. Two freight elevators will be installed in Mill No. 7 and the equipment of the picker building will include one freight elevator. Provision has been made for stair towers, toilet towers, etc.

Thomas E. Murray, Inc., New York, designing and construction engineers, are in charge of the work.

The Sadonia Mills, Mystic, Conn.

New Mill Increases Winding, Warping and Weaving Capacity—Wide Column Spacing—Further Increase Planned

By D. Elwell

Lockwood, Greene & Co., Engineers, New York

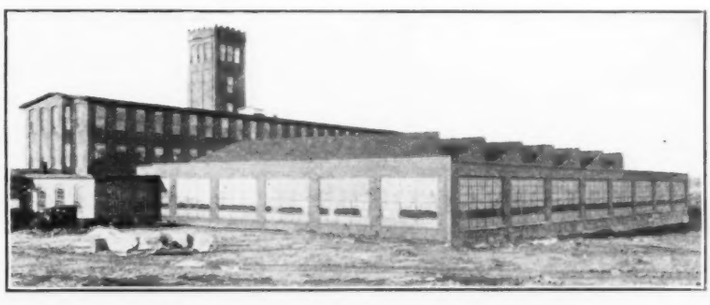
AN additional preparatory and weaving unit for the manufacture of high grade broad silks was constructed in 1925 for the Sadonia Mills, Mystic, Conn., whose product is sold by the Golding Fabrics Corp., 417 Fifth Ave., New York. The new unit is operated in conjunction with a complete existing unit which includes throwing for the former and the new operations. The new building work followed an engineering study and report as to the best means of enlarging the plant output, upon acceptance of which the construction work recommended was undertaken.

The structure is for additional winding, warping and weaving capacity. It is 104 by 202 ft., one story sawtooth, brick and steel frame construction, with plank roof, steel sash and maple top floor on pine underflooring over tar concrete base. It connects with the main mill through a service wing which includes shipping and receiving space and toilets to serve both the original and the new structure.

Wide Column Spacing

A wide column spacing, 25 by 34 ft., permits easy supervision through lack of obstruction to the vision, and a very efficient layout of both preparatory and weaving equipment. A clear height of 14 ft. to base of sawteeth is provided for the proper operation of jacquard looms, and the design includes gantry framing of structural steel for the jacquards, without intermediate supports, allowing a clear operating floor.

The machinery in the original mill was considerably rearranged to coordinate the processes in the two structures on the most efficient basis of operation. The south end of the new building is of temporary construction to permit its enlargement in accordance with the engineers' plans for the future growth of the plant. All machinery is individually motor driven and the mechanical and manufacturing equipment is of the most modern and efficient type. The mill is sprinklered throughout and heated from the main boiler house of the plant.



New Preparatory and Weaving Unit of Sadonia Mills

Lockwood, Greene & Co., New York, gave complete architectural and engineering service on the designs and supervision of the structural and mechanical work. Contractors were as follows: Building construction, T. J. Pardy Construction Co., Bridgeport, Conn.; heating and fire protection, C. N. Flagg Co., Meriden, Conn.; electric light and power wiring, Whitall Electric Co., Westerly, R. I.

Mojud Hosiery Dye Works

Dyeing and Bleaching Plant at Long Island City

An interesting structure built during 1925, is the new plant of the Mojud Hosiery Dye Works, 8th & Washington Aves., Long Island City, N. Y. It is designed for the processing of hosiery and includes complete dyeing, bleaching and finishing equipment for this product. The building is one story, approximately 100 by 60 ft., and has concrete foundations, brick bearing walls, steel sash, steel lintels, wood columns and framing, and plank roof, all structural timber being long leaf yellow pine. The floors are all concrete with cement finish. The roofing is Johns-Manville Co.'s five-play tar finish and all sheet metal work is 16 oz. copper. The building is steam heated, electric lighted, and sprinklered.

While all departments of the business are in the same structure, the dyehouse is separated from the form drying room by a metal lath and plaster partition. Toilet and rest room enclosures are similarly constructed. The boiler room enclosure is 12 in. brick bearing walls. Principal departments are the dyehouse, dry room, inspection, stock, packing and shipping departments.

Mojud Hosiery Dye Works, Inc., Long Island City, N. Y.

Dyehouse Ventilation

Ventilation in the dyehouse is secured by increased story height for this section, with continuous sash in the top wall sections, giving the effect of a full monitor. Skylights for light and ventilation are provided over the drying room. The dyehouse includes a complete laboratory in connection with the dyer's office. Special drains, floor trenches and pits have been provided as required for the equipment of the plant.

Steam for heating and processes is provided by two 67.5 h. p. Kewanee locomotive type boilers, served by a 75 ft. guyed steel stack. The boilers are coal-fired, coal storage being maintained at the rear of the plant, to which a driveway gives access.

The work was performed by the following New York contractors under the direction of Lockwood, Greene & Co., the engineers and architects for the work: General construction, Fisher Williams Corp.; heating and high pressure piping, James H. Merritt & Co.; plumbing and industrial water piping, John Edmiston & Son; electric light and power wiring, Watson Flagg Engineering Co.; fire protection, Industrial Automatic Sprinkler Co.

One of Macon's Textile Mills

Profits are Larger

In Macon!

Why?

Listen, Mr. Factory Owner:

An Eastern textile plant lost $80,000 on its operation last year. The president of that company thought he could trace his losses directly to those excessive production costs that Southern manufacturers are avoiding.

He investigated Macon, Georgia

Carefully he went into the facts: the initial outlay, the cost of moving his machinery, production, and finally the operation costs,—purchase of raw materials, labor, taxes—all of those items that figure into the final reckoning.

A comparative balance sheet was made up; on the one side his actual record of operation for the year 1924 in the East, and on the other, working schedules as he actually found them in Macon.

On the basis of identical sales, his plant, on which he lost $80,000 in 1924, in the East, would have yielded him a profit of $92,000 operating in Macon, Georgia.

Textile mills operating in and around Macon are *uniformly* working at a profit, as evidenced by the premiums which their securities command.

Wouldn't YOUR plant, or a branch of it, make more money in Macon? The Industrial Department of the Macon Chamber of Commerce would like to place in your hands informative literature that will explain Macon's many advantages for textile manufacturers. Please use the coupon.

From a Far West Broker

November 2nd a Spokane, Wash., broker wrote us in part as follows: "Kindly give me a list of some factories in your city manufacturing ready-to-wear clothing; such lines as underwear, hosiery, overalls, and, in fact, any ready-to-wear items."

"I am in the merchandise brokerage business and I have never yet represented a Southern factory that did not have good prices."

It costs less to live in Macon (see United States Dept. of Commerce figures). Trained labor is available and *labor costs* are lower.

Quantity power—at exceptionally low rates.

Construction costs are cheaper and sites are inexpensive.

Nine radiating railway lines and favorable rail rates solve transportation problems.

Strong banks.

187 miles from deep sea port.

In the very heart of the cotton producing section.

Chamber of Commerce
Macon, Georgia

MACON CHAMBER OF COMMERCE,
MACON, GEORGIA.

Please send information concerning Macon advantages for textile manufacturers.

Name .....

Address .....

TW

Mill Construction Report

(Continued from page 417)

weaves broad silk, the other produces yarn.

The new silk throwing plant established by the Stehlisilks Corp. at Waynesboro, W. Va., with provision made for a 100% increase in capacity, was among the important additions. The Edward Bloom Co. purchased a plant at Putnam, Conn., remodelled it and started a branch there with 250 looms. In Chicago the Oscar Heineman Corp. erected an addition to its mill at a cost of about $300,000.

Rayon Plants

As the artificial silk or rayon mills have formerly been counted among the silk mills, a comparison can not be made, but it is nevertheless known that greater strides were made in that branch than ever before. Eleven new rayon plants were established and an equal number of additions made by existing firms. The most important of the new plants were those of the American-Bemberg Corp. at Johnson City, Tenn., and the International Rayon Corp. at Elmira, N. Y.

Practically all of the older rayon companies expanded, the du Pont Rayon Co. starting construction of an 8,000,000 lb. unit at Buffalo, N. Y., and building the second unit of the Old Hickory, Tenn., plant, bringing the total for that branch to 10,000,000 lbs. per year. The Viscose Co. established new units at Roanoke, Va., and Parkersburg, W. Va.; erected a processing plant costing $400,000, and various other buildings at Marcus Hook, Pa., and a machine and woodworking shop at Lewistown, Pa.

Miscellaneous Mills

Under this heading comes the dyeing, bleaching and finishing plants, linen mills, and others not otherwise classified. Plants of the former class started up in New Jersey mostly, though the ones established there were not as large as those established in North Carolina. There the Sayles Finishing Plants, Inc., erected a large branch plant and village; the Southern Artsilk Dyeing Co. began dyeing and bleaching rayon and cotton yarns at Burlington, and the Belmont Processing Co. erected a plant at Belmont with a weekly capacity for handling 100,000 lbs. of yarn. The Central Franklin Process Co. erected a new plant at Chattanooga, Tenn., practically an exact duplicate of the Greenville plant, while the National Yarn Processing Co. gave Georgia an important addition by erecting a plant and village on its ten-acre site in Rossville.

Following are detailed reports of new mills, enlargements and improvements:

Detailed Report of New Mills

NEW COTTON MILLS

Alabama, Anniston. Lanier Mfg. Co.; capitalized at $50,000; start production of mop yarns and mops.

Birmingham. Strowd-Holcombe Cotton Mills, Inc.; purchase plant of Preston Motor Co. and convert into 10,000 spindle mill for cotton flannels.

Boaz. Ernestine Cotton Mills; new twine mill; 65 x 140 ft.; 2,000 spindles.

Opelika. Pepperell Mfg. Co.; erect new mill for production of coarse goods; about 20,000 spindles and 600 looms shipped from Biddeford, Me., plant.

California, Los Angeles. California Braid Co.; capitalized at $25,000; start production of shoe laces in leased quarters.

Monrovia. California Textile Products Co.; new mill for filter and drapery cloths and twines; two-story building, 40 x 120 ft.; 550 spinning spindles, 250 twisting spindles, 8 looms.

Georgia, Shannon. Brighton Mills; erect plant consisting of two-story, 345 x 134 ft. spinning mill, a one-story, 505 x 153 ft. weave shed, large warehouse and boiler house, also houses for operatives; transfer machinery from Passaic, N. J. plant to new mill.

Whitehall. Larnell Cotton Mills; one-story, 125 x 78 ft. mill equipped with 144 looms for light sheetings.

Maine, Portland. Presumpscot Mfg. Co.; incorporated for $10,000; purchase plant at cor. Deer & Fore Sts.; start production of tire fabrics and twines.

Massachusetts, North Oxford. Frederick Textile Co.; start manufacturing fancy cotton, woolen and worsted cloth in leased quarters; 54 narrow looms, 2 sets cards; 2 mules.

West Chelmsford. Sugden Co.; convert plant of Sugden Press Bagging Co. into fancy cotton goods mill.

Mississippi, Corinth. Corinth Cotton Mills; lease building and start production of 4s yarns, equipped with 1,200 spindles.

New Jersey, Boonton. Arena Twine & Cordage Mfg. Co., Inc.; capitalized at $500,000; equip one-story brick and concrete plant, 50 x 200 ft. for manufacture of soft fibre twines.

Burlington. Burlington Textile Mills, Inc.; start producing upholstery goods at Broad and Elm Sts.

Elizabeth. Loudat Fabric Corp.; capital stock of $125,000; purchase plant and equip for manufacture of cloth foundation for lace making.

Fairview. Jersey Lace Works, Inc.; lease plant and start operations.

New York, Albany. New York Central Railroad Co.; build new plant for upholstery cloth, at cost of about $96,000.

Brooklyn. Elite Plush Co.; new firm; start manufacturing cotton, silk, mohair and wool plushes at 77 Washington Ave.; 8 looms.

North Carolina, Belmont. Belmont Fabric Co.; capitalized at $350,000; build mill and equip with 3,500 spindles and 250 looms for coarse cotton fabrics.

Charlotte. Co-Lin Mills, Inc.; lease plant of Piedmont Commission Co. and start manufacturing dress goods and other fabrics; operate 150 looms.

Charlotte. Scandanavia Belting Co. (Paterson, N. J.); purchase about three acres of land in Charlotte and plan construction of new plant there.

Charlotte. Stuart Mills, Inc.; incorporated for $100,000; start production of fancy dress goods, silk and cotton mixtures, in former Belbro Mills; 40 looms.

Columbus. Columbus Cotton Mills, Inc.; new plant of 1,428 spindles for 2s to 12s yarn; mill building 60 x 150 ft.; warehouse, 50 x 100 ft.; 12 operatives houses.

Durham. Yarbrough Mills, Inc.; capitalized at $250,000; build one-story brick mill, 82 x 140 ft.; 100 looms for novelty cloths.

Franklinton. Vann-Moore Mills Co.; incorporated for $500,000; purchase plant, construct addition and equip with 140 looms for terry towels.

Gastonia. Gastonia Weaving Co.; buy plant and install 30 looms for narrow cotton and silk fabrics such as labels.

Granite Falls. Granada Mill; new mill of Granite Falls Mfg. Co. to manufacture waste yarns and mops; two-stories, 100 x 400 ft.

Pittsboro. Pompton Lakes (N. J.) Weaving Co.; build new brick plant at Pittsboro; 126 x 50 ft.

Roxboro. Somerset Mills (John Watt's Sons Co., Philadelphia); erect branch mill at Craigville, N. C.; one-story, 100 x 200 ft.; 100 looms at start; also 17 houses.

Shelby. Ora Mill Co.; complete specialty mill (contract awarded last year); 6,000 spindles, 150 looms.

Shelby. Shelby Cloth Mills Co.; new fancy dress goods mill; initial equipment, 150 looms; brick structure, 125 x 200 ft.

Pennsylvania, Philadelphia. U. S. Pile Fabric Co.; start manufacture of cotton plush at Adams Ave. and Leiper St., Frankford; 15 looms.

Clarks Summit. Scranton (Pa.) Lace Co.; establish branch mill at Clarks Summit; two-story, 60 x 80 ft., reinforced concrete.

Rhode Island, Pawtucket. Britton Threads, Inc.; incorporated for $50,000; start operations at 244 Pine St.

Warren. Consolidated Thread Mills, Inc.; organize and start production of high grade thread.

South Carolina, Greenville. Piedmont Plush Mills, Inc.; capitalized at $450,000; new drapery and upholstery goods plant; main structure of steel and brick, 90 x 181 ft. with provision for addition to increase length to 225 ft.; also dyehouse and boiler room; 24 looms.

Tennessee, Tellico Plains. Tellico Cotton Mills Co.; new plant for production of cotton yarns 8s to 10s, 3-ply; one-story brick mill, 60 x 156 ft.; 2,000 spindles.

Texas, Bowie. Bowie Cotton Mills; start construction of mill; one-story, 80 x 380 ft.; 5,000 spindles and 6 broad looms for cord fabrics.

Galveston. Galvez Mills; incorporated for $1,000,000; begin erection of new mill; main building two-stories, 300 x 103 ft.; will equip with 14,000 spindles from plant of Nobska Spinning Co., Taunton, Mass.

San Marcos. Planters & Manufacturers Cotton Mills; build shirting mill at San Marcos; 10,000 spindles and auxiliary machinery; main building 120 x 320 ft.

NEW WOOL MILLS

California, Los Angeles. Los Angeles Felt Co.; incorporated with capital of $20,000; initial equipment of two camelback felt machines.

Connecticut, East Woodstock. Stillwater Worsted Mills; construct branch plant.

Massachusetts, Enfield. Liberty Woolen Co; start manufacturing women's cloakings, suitings, etc.; 4 sets of cards, 2 pickers and 30 48-in. looms.

Holliston. Heritage Woolen Mills, Inc.; begin production of suitings, overcoatings and cloakings; 7 sets and 44 looms.

Hyde Park. Standard Mohair Plush Co.; incorporated for $100,000; start making pile fabrics at 188 Providence St.

Methuen. Massachusetts Worsted Mills; organize and start production of worsteds.

Worcester. Barbara Woolen Co.; start operations at 122 Gold St.; 4 sets of cards, 4 pickers, 36 narrow and 4 broad looms for suitings.

Worchester. MacDay Rework Wool Co.; begin manufacturing at 245 Harding St.

New Jersey, Passaic. Gold Bond Worsted Mills; incorporated for $100,000; equip plant at 29 Grace Terrace with 30 looms.

New York, Milton. Storm King Woolen Co.; build new mill of brick and concrete with 12,000 sq. ft. floor space; 2 sets cards; 40 looms.

Stockport. Empire Spinning Mills, Inc.; capitalized at $20,000; new mill on woolen and merino yarns; 5 sets, 5 mules, 1 garnett, 2 twisters.

Watervliet. P. H. Sochier Yarn Mill; new plant established at 100 First St.; 1 set cards, 1 mule, 1 mixing picker, 2 cone winders, 2 spoolers.

Pennsylvania, Philadelphia. Columbia Rug Mills, Inc.; organized with capital of $50,000; new mill equipped with 60 looms.

Philadelphia. Premier Textile Mills; install 6 broad looms and auxiliary equipment for commission warping and weaving of men's wear and dress goods.

East Downingtown. Victor Spinning Co.; capitalized at $100,000; purchase part of real estate of Dowingtown Woolen Mills and start new plant on wilton rug and carpet yarns.

Rhode Island, North Smithfield. Valleystone Mills Co.; new firm; start production of fine worsted; 24 looms.

Texas, Denton. Texas Rug Mills; new plant on low and medium priced rugs; initial equipment, 2 looms.

NEW KNITTING MILLS

Alabama, Anniston. Avalon Knitwear Co.; transfer one unit of plant from Utica, N. Y. to Anniston; 4 spring needle and 80 latch needle knitting machines; 80 sewing machines.

Eufaula. Glorie Underwear Mills, Inc. (Reading, Pa.); build new plant; two one-story buildings, 350 x 60 ft., for manufacturing purposes, and 200 x 60 ft. power house.

Huntsville. Aycock Hosiery Mills (South Pittsburg, Tenn.); establish branch mill with equipment of 100 knitting machines and 30 loopers.

Huntsville. Erwin Mfg. Co.; start production of men's flat fleece cotton underwear; 16 knitting machines, 6 ribbers, 24 sewing machines.

California, Hollywood. Hollywood Silk Hosiery Mills, Inc.; capitalized at $500,000; start operations equipped with 100 circular machines and three units of full-fashioned machines.

Los Angeles. Sunset Silk Hosiery Mills, Inc.; new two-story mill, 70 x 135 ft.; one-story dyehouse and finishing department, 33 x 65 ft., and one-story boiler house, 20 x 38 ft.; cost approximately $85,000.

San Francisco. Wardell Knitting Mills; start production of ladies' and children's sweaters; 11 knitting and 10 sewing machines.

Connecticut, Poquonock. Princess Knitting Mills, Inc.; incorporated for $20,000; start making ladies' lingerie in glove silk and rayon knitted cloth.

Georgia, Griffin. J. A. Evans & J. W. Gresham; establish mill for production of fleece lined underwear and sleeping garments in building having about 21,000 sq. ft. floor space.

Illinois, Fairfield. Sexton Mfg. Co.; erect one-story addition, 60 x 144 ft., to Fairfield Mill; also branch plant having 9,000 sq. ft. of floor space, for manufacture of underwear, at Grayville, Ill.

Rochelle. Rochelle Knitting Mills, Inc.; organize and start production of shaker sweaters equipped with 8 latch needle machines.

Kentucky, Paducah. Paducah Hosiery Mills, Inc.; erect branch plant at Arlington, Ky., and equip with 36 knitting machines, 59 ribbers and 10 loopers; enlarge dyehouse, install new boiler unit and 25 knitting machines for production of women's rayon hosiery in Paducah mill.

Maine, Waterville. Kennebec Hosiery Co.; start operations equipped with 6 knitting machines, 2 ribbers, 1 looper, 1 sewing machine.

Massachusetts, Chelsea. Eagle Hosiery Co., Inc.; incorporated for $25,000; start producing in leased quarters; 10 knitting machines.

Wakefield. Fenway Knitting Mills; start making ladies' men's and boys' knitwear and golf hose as branch of Middlesex Knitting Co.

Worcester. C. E. Robinson Co., Inc.; capitalized at $25,0000; new knitted elastic webbing mill established at 70 Piedmont St.

Michigan, Bay City. Hogle Knitting Co.; incorporated for $5,000; start production of sweaters and novelties; 10 flat knitting machines, 1 ribber, 2 loopers and 8 sewing machines.

New Hampshire, Franklin. G. F. & S. Hosiery; new firm; make men's 124-needle cotton and wool half hose.

New Jersey, Blackwood. Blackwood Silk Hosiery Co.; start construction of new brick and steel plant to have about 50 full-fashioned machines.

New Brunswick. Kennedy Mfg. Co., Inc.; new company; begin production of knitted rayon fabrics with 8 knitting machines.

Union City. Hudson Silk Hosiery Co.; new firm; start operations equipped with 11 full-fashioned knitting machines.

New York, Brooklyn. Diana Underwear Mills, Inc.; new firm to make women's rayon underwear, balbriggan and jersey cloth at 1425-37th St.; 72 knitting and 48 sewing machines.

Brooklyn. Mazell Knitwear Corp.; incorporated for $10,000; start making ladies' sweaters; 6 flat knitting and 7 sewing machines.

Clayton. Warner Knitting Co., Inc.; build concrete and steel mill, two-stories, 40 x 80 ft., and frame warehouse, 20 x 36 ft., one-story, with concrete basement; 24 sewing and 12 knitting machines for cotton bathing suits and sweaters.

Cohoes. Riberdy & Derocher; equip two-story plant with 80 spindles and 12 knitting machines for knitted rayon underwear cloth.

Fultonville. Peasley Knitting Mill; start producing pure silk tricot jersey and rayon knit underwear in former Weichert-Peasley Mill.

Johnstown. Grewen & Lenon Co., Inc.; capatalized at $60,000; lease plant and begin manufacturing chamoisette cloth and gloves.

New York. Gold Tee Knitting Mills; start making sweaters, scarfs, knit dresses and suits at 118 W. 22d St.; 10 Raschel machines, 2 loopers, 14 sewing machines.

Oswego. Oswego Rayon Corp.; organized with paid in capital of $759,999; take over land, buildings and water power rights of New Fabric Cloth Mills, Inc.; will make rayon underwear.

Stittville. Stittville Silks, Inc.; capitalized at $10,000; purchase former plant of Stittville Knitting Co., remodel and install machinery for glove silk underwear; 12 tricot knitting machines.

North Carolina, Asheboro. Parks Hosiery Mills, Inc.; build brick mill, two stories high, 100 x 60 ft.; equip with 40 knitting machines.

Boone. Boone Knitting Mills, Inc.; incorporated for $40,000; start manufacture of men's 220 needle silk and cotton hose; initial equipment, 28 knitting machines, 6 ribbers, 6 loopers; later increase.

Burlington. Liberty Hosiery Mills, Inc.; construct one-story, 30 x 52 ft. mill; 34 knitting machines for half hose.

Catawba. Elliott knitting Mills (Hickory, N. C.); establish branch hosiery mill in Catawba; some equipment moved from Hickory.

Hickory. Setz-Right Hosiery Mill; capitalized at $25,000; start production of half hose in two-story, 58 x 125 ft. brick plant; 50 200-needle machines.

Thomasville. Maurice Mills Co.; start manufacturing hosiery with initial equipment of 50 knitting machines, 8 loopers, 4 sewing machines.

Ohio, Cincinnati. Louis Moore, Inc.; capitalized at $50,000; move from 121 Government Sq. to 241 Walnut St. and install additional knitting machines for knitted ties.

Cleveland. General Knitting Co.; install 15 knitting and 20 sewing machines at 1960 E. 57th St. for sweater coats and novelties.

Cleveland. Gregory & Roodhuyzen, Inc.; start manufacture of women's hosiery at West 3d St.; 30 knitting machines, 3 loopers.

Oregon, Portland. Wooly-West Knitting Mills; incorporated for $20,000; 2 circular and 4 flat knitting machines, 2 ribbers, 2 loopers, 4 sewing machines for jerseys, shaker sweaters, caps and socks.

Pennsylvania, Philadelphia. Ajax Hosiery Mills; capitalized at $100,000; start operations in three-story brick plant at Jasper & Orleans St.; 36 42-gauge full-fashioned knitting machines, 10 winders, 12 loopers, 12 seamers and finishing machinery.

Philadelphia. Century Knitting Mills; begin operations at 3560 N. Marshall St., equipped with 6 knitting machines, 2 loopers, 2 sewing machines.

Philadelphia. Da Lu Hosiery Co.; new concern; erect mill and equip with 30 full-fashioned machines.

Philadelphia. Doerfler Hosiery Mills; chartered with capital of $40,000; secure quarters at D St. and Erie Ave.; start producing full-fashioned hosiery.

Philadelphia. Diamond Shaker Sweater

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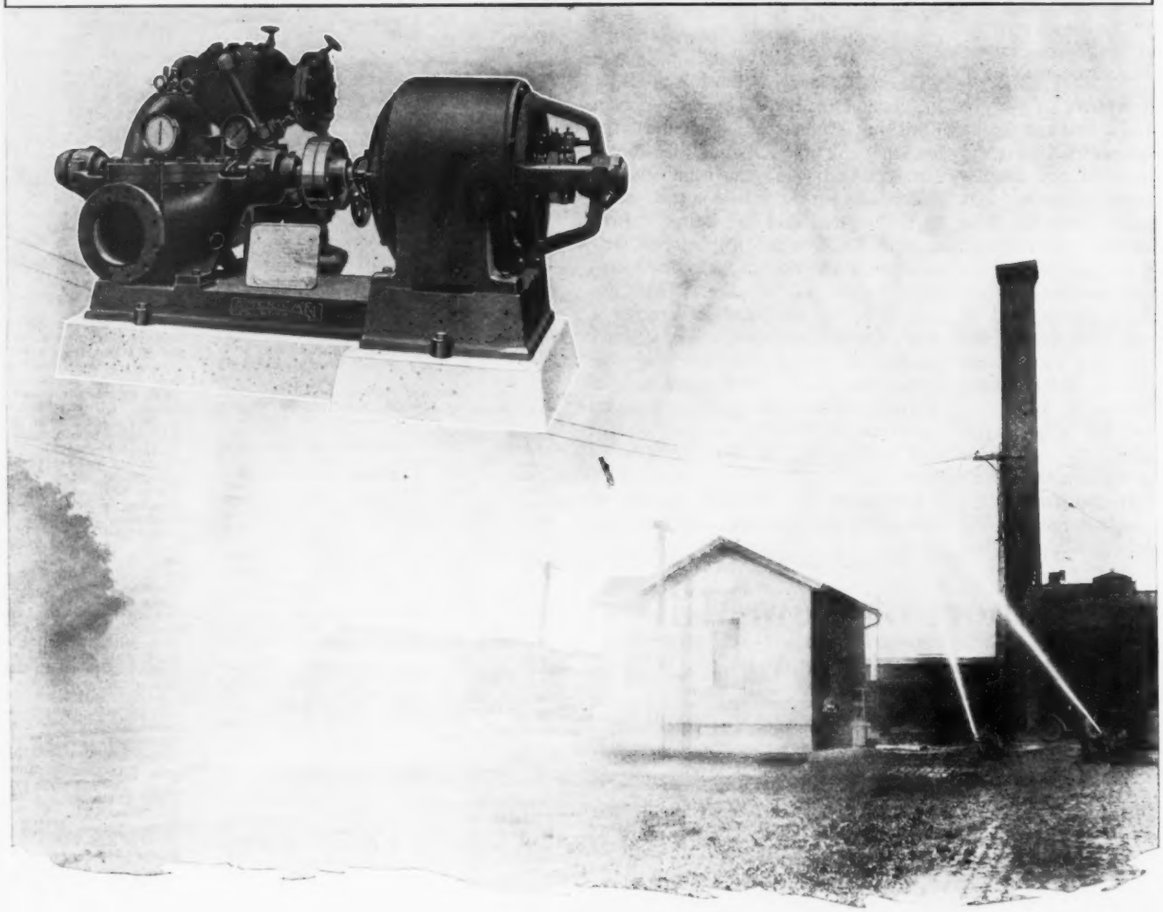

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Mills; start production of shaker sweaters at 1015 Marshall St.; 4 knitting machines, 1 ribber, 6 sewing machines.

Philadelphia. Morris Ellis; purchase mill building at Emerald & Westmoreland Sts., formerly occupied by Wm. D. Whitaker; make alterations and equip for hosiery manufacture.

Philadelphia. Emmeth Textiles, Inc.; purchase 30 full-fashioned knitting machines, 4 loopers, 5 winders, 4 seamers and 3 Merrow machines; start making silk neckties and hosiery at 1208 Race St.

Philadelphia. Fashion Maid Hosiery Co.; construct new plant; brick, one-story, 42 x 50 ft.; 3 full fashioned machines.

Philadelphia. Frenchweave Hosiery Mills, Inc.; new mill on ladies' and men's tailored hosiery; 150 knitting machines.

Philadelphia. Hamilton Mills; start manufacture of ladies' and men's seamless hosiery equipped with 90 latch needle knitting machines.

Philadelphia. Harcher Annable Co.; organize and begin operations at 1926 N. Front St.; 10 circular knitting and 20 sewing machines on ladies' underwear.

Philadelphia. Harron Hosiery Mill; capitalized at $180,000; new full-fashioned hosiery mill established at 3360 Frankford Ave.

Philadelphia. International Silk & Hosiery Mills, Inc.; organize and start manufacturing full-fashioned hosiery at 1920 E. Venango St.

Philadelphia. Ironclad Knitting Mills; new concern at 37 N. 3d St.; 6 knitting machines and auxiliary equipment for sweaters and other knit goods.

Philadelphia. Harry Marks; install full-fashioned hosiery machinery in Fritz Bldg. at 10th and Diamond Sts.

Philadelphia. Marshall Knitting Mills; lease second floor in building at Marshall and Spring Garden Sts.; 3 shaker machines and auxiliary equipment for sweaters.

Philadelphia. Ogontz Mfg. Co.; start production of rayon underwear cloth and knitted cloth for dresses; 8 circular knitting machines; 3 winders.

Philadelphia. Onlibest Hosiery Mills; capitalized at $20,000; secure third floor at 2545 N. Broad St. and equip with 12 full-fashioned machines.

Philadelphia. I. Seidman & Co.; establish plant at 44 N. 9th St. for men's and boys' knitted ties; 15 knitting and 3 sewing machines.

Philadelphia. Spring Maid Hosiery Mills; start operations at Adams Ave. and Leiper St., Frankford; 36 spring needle knitting machines; plan to add 20 knitting machines.

Doylestown. Doylestown Full Fashioned Silk Hosiery Mill; build new mill; initial equipment, 8 leggers and 2 footers.

Hatboro. Oscar Nebel Co. (formerly of Philadelphia); erect new one-story and basement mill, 100 x 285 ft., with extension 40 x 50 ft.; 50 full-fashioned machines.

Ickesburg. Juniata Hosiery Mills (Mifflintown, Pa.); erect branch plant at Ickesburg; two stories high, 50 x 150 ft.

Lansdale. Telltale Hosiery Co.; capitalized at $25,000; start producing ladies' silk and rayon hosiery; 3 knitting machines, 2 loopers, 2 sewing machines.

Lehighton. Floyd M. Harelman; establish new knitting mill.

Luzerne. Absorbent Knitting Co., Inc.; new concern; start producing children's novelty seven-eighths hose; also men's novelty socks and infants' ribbed hose; 30 knitting machines.

Nescopeck. Nesco Knitting Mills; incorporated for $12,000; begin manufacturing sweaters and bathing suits; 25 doz. weekly.

Reading. Berne Hosiery Mills; new mill on silk and cotton hosiery; 28 spring needle and 20 latch needle knitting machines, 4 ribbers, 4 loopers, 3 sewing machines.

Reading. Reading Maid Hosiery Mill; erect first unit of plant for women's full-fashioned silk hosiery; brick and steel, one-story 100 x 250 ft.; capacity for 44 machines; plan erection of five units.

Shillington. Fedden Bros., Inc. (New York); purchase approximately 65,000 sq. ft. of ground at Shillington and plan new mill.

Sinking Springs. H. W. Anthony Co.; build one-story, 100 x 150 ft. branch mill at cost of $50,000; 10 sets full-fashioned machines for women's hosiery.

South Langhorne. Modern Maid Silk Hosiery Co.; capitalized at $50,000; erect plant and start operations with about 9 full-fashioned machines and supplementary equipment.

Rhode Island, Woonsocket. Park Knitting Mills, Inc.; lease plant at 50 Allen St. and start making general line of knit goods; 6 latch needle and 2 spring needle machines.

South Carolina, Gaffney. Sultrene Mills Inc.; capitalized at $10,000; start producing men's and women's sport hosiery; 25 knitting machines, 3 ribbers, 3 loopers, 19 sewing machines; purchase equipment of Acme Chemical Co.

Spartanburg. Powell Knitting Co. (Philadelphia); purchase Model Mill of Textile Industrial Institute and establish plant there of 200 knitting machines; build 25 houses for employes.

Tennessee, Soddy. Soddy Hosiery Mills (to be operated by Richmond Hosiery Mills, Rossville, Ga.); build two-story, 60 x 150 ft. addition to existing plant and equip with 225 knitting machines, 450 ribbers and 50 loopers.

Texas, Fort Worth. Dixie Hosiery Mills, Inc.; capitalized at $25,000; purchase equipment of Ellis County Hosiery Mill, Waxahachie, Tex. and transfer to Burton Bldg., Fort Worth; also add new machinery.

Houston. Ho-Tex Knitting Mills; new ladies' full-fashioned hosiery mill; 2 knitting machines, 1 looper, 1 sewing machine.

Sherman. Pool Knitting Mills; incorporated for $25,000; equip plant with 10 knitting machines, 2 ribbers, 1 looper and dyeing machinery for men's hose.

Yoakum. Yoakum Hosiery Mills Co.; erect brick mill, 100 x 200 ft. and install 50 knitting machines, 20 loopers and dyeing equipment.

Virginia, Martinsville. Pannill Knitting Co.; purchase building and equip with 17 knitting and 35 sewing machines for men's knitted ribbed union suits.

Roanoke. Roanoke Knitting Mills; capitalized at $150,000; take over one-story, 150 x 200 ft. brick plant and remodel; 27 knitting machines for ladies' knit underwear.

Canada, London, Ont. Richmond Hosiery, Ltd.; capitalized at $150,000; start manufacturing.

London, Ont. Supersilk Hosiery, Ltd.; start operations in leased plant at corner of Pall Mall and Richmond St.; 20 knitting machines.

New Building Erected for Pohatcong Hosiery Mill, Inc., Washington, N. J.

NEW SILK MILLS

Connecticut, New London. Plymouth Silk Mills, Inc.; new mill established in leased quarters; 24 looms.

Norwalk. Powell Silk Co.; organized by Elias Powell; lease plant and install 75 looms for broad silks.

Willimantic. S. P. S. Silk Co.; incorporated for $50,000; lease 60 x 90 ft. building and equip for manufacture of sewing silks.

Massachusetts, Fall River. Fall River Silk Co.; start commission weaving equipped with 40 plain looms, 4 winders, 2 quillers and 2 warpers.

Fall River. Pansy Silk Co.; new mill; start up 100 box looms, 3 warpers, 5 winders and 3 quillers.

New Bedford. Old Colony Silk Mills Corp.; organize and plan installation of about 35,000 spindles in building erected by New Bedford Textile Corp.; 144 looms to be installed in Union Storage Warehouse.

New Jersey, Hackettstown. Mohawk Silk Throwing Co., Inc.; capitalized at $10,000; purchase mill of W. H. Ashley Silk Corp.; install 7,500 spinning spindles; plan to increase capacity 100% by June, 1926.

Paterson, Augusta Broad Silk Works, Inc.; new company with capital of $100,000; lease quarters and install about 60 looms and auxiliary machinery.

Paterson. Batmar Silk Co.; co-partnership formed by Joseph Baten and Boris Margolin; equip plant with 30 looms.

Paterson. Consolidated Silk Mills, Inc.; capitalized at $150,000; lease quarters and install 400 looms.

Paterson. G. G. G. Silk Mfg. Co.; organized with capital of $50,000; start producing broad silks at 358 Hamilton Ave.

Paterson. Maxwell Silk Co.; new company; install 40 looms and auxiliary machinery in Strange Mill No. 5.

Paterson. Perfect Textile Mills, Inc.; incorporated for $100,000; begin producing broad silks on 28 box looms.

Paterson. Press Silk Mills, Inc.; incorporated for $100,000; lease space and install looms.

Paterson. Reliable Silk Yarn Co.; new company to manufacture silk yarn; authorized capital $125,000 pfd. and 1,000 shares, no par value common.

Paterson. Rheinberger Silk Mills; incorporated for $100,000; lease plant at 10th Ave. & E. 18th St.; initial equipment 24 looms.

Paterson. Umbrella Silk Corp.; capitalized at $50,000; start operations equipped with 2 winders, 1 quiller and 16 looms.

Paterson. Usdan Silk Co.; start making broad silks and silk shawls; 28 box looms.

Paterson. White Star Silk Co.; incorporated for $50,000 to manufacture broad silks; lease quarters.

New York, Brooklyn. Viola Silk Mills, capitalized at $100,000; start manufacturing silk jersey glove cloth at 33-34th St.; 18 spring needle knitting and 36 sewing machines.

North Carolina, Charlotte. Veritas Silk Mills, Inc.; (West New York, N. J.); build new plant; one-story, 80 x 100 ft.; 250 spindles; 40 looms.

High Point. Hillcrest Silk Mills (West New York, N. J.); erect new plant at cost of $300,000; one-story, 150 x 300 ft.; 500 box looms.

Oregon, Portland. Pioneer Silk Co.; erect first unit of silk ribbon mill; one-story, 136 x 66 ft.; 16 two-section looms.

Pennsylvania, Allentown. Greenleaf Silk Co.; capitalized at $25,000; lease plant and start up 69 looms, 4 warpers and 7 winders.

Allentown. Lova Silk Corp.; lease 10,000 sq. ft. of space and install 36 72-in. looms; will add 18 narrow looms later.

Bethleham. H. S. & G., Inc.; capitalized at $100,000; start silk throwing and converting of all kinds combination yarns at Bethlehem and Coaldale, Pa.

Danville. Starr Silk Co.; new broad silk mill; one-story, brick, 150 x 50 ft.; 40 looms.

Easton. Paxinosa Silk Co.; capitalized at $100,000; lease space at 1001 Center St.; install warping, winding and quilling machines and looms.

Mountainville. Winona Silk Co. (Allentown, Pa.); purchase building and establish branch plant in Mountainville; 32 wide looms, 3 warpers and 6 winders.

Pittston. Sheridan Silk Mills, Inc.; acquire plant, remodel and equip with 62 looms.

Reading. Reading Silk Co.; capitalized at $50,000; start manufacture of broad silks at 701 Walnut St.; 21 box looms, 2 winders, 1 warper.

Scranton. Delawanna Silk Mills, Inc.; begin producing broad silks equipped with 50 box looms, 2 warpers and 3 winders.

Wyoming. Sheridan Silk Mills; acquire plant, remodel and equip with 62 looms.

Rhode Island, Central Falls. Broadloom Fabrics, Inc.; capitalized at $100,000; lease plant at 467 Mill St. and begin manufacturing broad silks.

Central Falls. Flower Silk Mills, Inc.; incorporated for $25,000; start producing satin in new plant at Cross & Mill Sts.

Central Falls. General Fabrics Corp.; organize and start manufacture of silk cloth.

Pawtucket. Concord Textile Mills; capitalized at $100,000; establish plant at 486 Pawtucket Ave.; about 70 wide looms for georgette crepes, etc.

Virginia, Waynesboro. Stehlisilks Corp.; erect new silk throwing plant; one-story, saw-tooth roof, having 25,000 sq. ft. floor area; arranged for future addition of 100% capacity.

NEW RAYON MILLS

Massachusetts, Canton. Klis Rayon Corp. of America; acquire real estate, buildings and machinery of Founders Silk Syndicate; erect new finishing building having 50,000 sq. ft. of floor space.

Michigan, St. Clair. Chemical City Rayon Corp.; capitalized at $1,300,000; will build plant during 1926; initial unit to produce 1,000 lbs. of rayon daily.

New Jersey, Passaic. Commercial Fibre Co. of America, Inc.; purchase silk throwing mill of A. P. Villa & Bros.; make necessary changes in plant for converting rayon; add dyeing department.

Paterson. Rayon Textile Corp.; new firm; start winding, warping, copping, doubling, reeling, warp picking, etc. at 14 Cortlandt St.

New York, Elmira. International Rayon Corp.; organize and start construction of first unit, to have capacity of 5,500 lbs. of 150 denier rayon per day.

Utica. Skenandoah Rayon Corp.; new corporation; acquire property of Skenandoah Cotton Co.; make alterations preparatory to installation of rayon machinery.

Pennsylvania, Philadelphia. Rayon Fibre Products Co.; start operations at 2016 N. Hancock St.; 6 worsted cards, 6 comba, 1 dryer, 3 openers.

Susquehanna. Oakland Rayon Products Co., Inc.; new firm for winding rayon on cops, cones and tubes; capacity 15,000 lbs. per week of converted yarn; additional capacity of about 7,000 lbs. per week of twisting.

Rhode Island, River Point. H. & H. Mfg. Co., Inc.; incorporated for $50,000; start producing rayon fabrics in plant formerly occupied by Pawtucket Valley Textile Co.; 100 looms.

Tennessee, Johnson City. American-Bemberg Corp.; start construction of reinforced concrete and steel buildings to have approximate floor space of 400,000 sq. ft.; will produce approximately 7,000 lbs. of Bemberg per day.

West Virginia, Parkersburg. Viscose Co. (Marcus Hook, Pa.; purchase 125 acres of land and award contract for new branch plant.

NEW MISCELLANEOUS MILLS

California, San Francisco. Edward L. McRoskey Mattress Co.; build new plant, three-story and basement; steel frame and hollow tile; cost $90,000.

Connecticut, Bridgeport. Real Braid Mfg. Co.; start production of braids and shoe laces in leased quarters; 300 braiding machines.

Glasgo. Glasgo Finishing Co.; incorporated for $300,000; purchase Glasgo plant of American Thread Co.

Middletown. Superior Mfg. Co.; new company with capital of $50,000; start manufacturing asbestos brake lining and multiple disc clutch facings.

Mystic. Textile Rubber Co.; capitalized at $40,000; start production of rugs and floor coverings made from rubber and textile fibre.

Georgia, Rossville. National Yarn Processing Co.; purchase about 10 acres of land and two-story building, 190 x 60 ft.; erect additional L-shaped building, one story high, 530 x 50 ft. and 60 x 100 ft. power house; also build cottages for employes.

Maine, Alfred. All American Products Co.; take over plant of Alfred Mfg. Co. and install flax machinery for preparing fibre from degumming to the manufacture of tops.

Maryland, Baltimore. Woodberry Dye Works; start operations in Munson Bldg. on Key Highway.

Massachusetts, Bedford. W. J. Rogister Textile Co.; incorporated for $50,000; start commission dusting, picking, carding and garnetting of jute, hemp, ramie, cotton, etc.

Fall River. Hatters' Fur Mills; capitalized at $50,000; start production of hatters' fur in former Fall River Webbing Mills.

Framingham. Steacle Garnetting Co.; incorporated for $50,000; initial equipment 3 garnetts.

New Bedford. New Bedford Cotton Cleaning Corp.; organize with capital of $50,000; start operations in building owned by New Bedford Warehouse Co.

North Adams. North Adams Garnetting Co.; incorporated for $10,000; purchase machinery and install in Ellis Bldg.

Taunton. Linen Products Co., Inc.; capitalized at $100,000; purchase Oakland Mills, equip and start manufacture of absorbent linen products.

Waltham. Paulastic Co.; capitalized at $50,000; lease plant and start making elastic webbing.

Waltham. Reliance Garnetting Mills; equip two-story, 150 x 50 ft. concrete building with 4 garnetts and 3 pickers.

New Hampshire, Penacook. A. A. Tidd & Co.; start manufacture of shoddy equipped with 8 sets of cards and 3 pickers.

New Jersey, Cranford. Beebe Waterproof Cordage Co.; organize and begin producing hand laid cotton lines, etc., at 335 Centennial Ave.

Hawthorne. Rayon Processing Co.; incorporated for $50,000; start commission work.

Hawthorne. Wasbauer & Kramer, Inc.; start dyeing and printing plant here.

Jersey City. Brietwieser Dyeing Co., Inc.; capitalized at $25,000; daily capacity 4,000 lbs. of rayon and cotton yarns.

New Brunswick. Lyons Piece Dye Works (Paterson); erect new plant in New Brunswick, costing in excess of $80,000, with equipment.

Paterson. American Piece Dyeing & Skein Printing Co.; capitalized at $50,000; begin operations at 444 E. 22d St.

Paterson. French-American Silk Printing Co.; new company with capital of $100,000; start operations at 52 Putnam St.

Paterson. J. Galli Dyeing Co.; build plant for dyeing ribbons.

Paterson. Onyx Print Works; start commission printing at 74 George St.

Paterson. Paramount Piece Dye Works, Inc.; incorporated for $100,000; buy plant at 120-124 Third Ave. and equip.

Paterson. Parisian Textile Printing Co.; capitalized at $50,000; purchase plant and start operations.

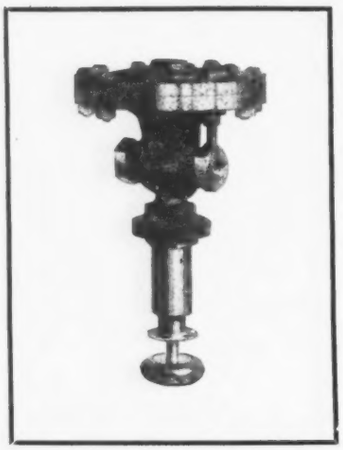
Paterson. Princess Print Plants, Inc.; organize and lease plant at 500 Marshall St.

New York, Buffalo. Butterworth Dyeing & Bleaching Works; lease dyehouse at 19 Doat St. and start operations.

Watervliet. Slade Products, Inc. (New York); lease Barker Bldg. and install machinery for brake linings and automobile fabrics.

North Carolina, Asheville. Sayles Finishing Plants, Inc.; build branch plant to have weekly capacity of 1,000,000 yds.; also village of 75 houses.

Belmont. Belmont Processing Co.; erect



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STEAM SHOVEL WORK
BRIDGES DAMS

KENNEDY ENGINEERING CO.
6 Beacon St. -:- Boston, Mass.

plant to have weekly capacity for handling 100,000 lbs. of yarn; main building 100,000 sq. ft. floor space; separate building to house boilers and caustic recovery plant; also new office building.

Burlington. Southern Artsilk Bleach & Dye Works; authorized capital $100,000; new firm to dye and bleach in the skein, rayon and cotton yarns; 10 dye vats, also 10 spoolers and 2 100-spindle cone winders; later change name to Southern Dyeing Co.

Charlotte. Salembier & Villate, Inc.; lease new mill construction building, 150 x 150 ft. and establish plant for processing of silk and rayon.

Oregon, Salem. Miles Linen Co. (organized last year); erect first unit of plant; main building of reinforced concrete, 100 x 142½ ft.; 34 x 60 ft. warehouse! 300 spinning frames.

Pennsylvania, Philadelphia. Frankford Dye Works; silk yarn dyeing business established at 4330 Factory St., Frankford.

Philadelphia. Sarmac, Inc.; new company; start treating and converting tussah silk, rayon and also malva fibre, at 2601 N. Hancock St.

Philadelphia. Woodcock & Young; new hosiery dyeing and bleaching plant started at Penn St. and Bellefield Ave., Germantown; capacity 2,500 lbs. per day.

Easton. Plymouth Silk Dyeing & Finishing Co.; new department of Haytock-Cronemeyer Co.; dyeing to trade.

Reading. Textile Printing Co.; new concern; start operations at 530 N. 3d St.

Slatington. Community Rug Mills, Inc.; capitalized at $15,000; remodel building, install machinery for braided rag rugs.

Rhode Island, Central Falls. Rayon Dye Works; incorporated for $50,000; establish plant with weekly capacity of 10,000 lbs.

Cranston. Brownsword Towline Works; organize and start experimental operations.

Phenix. McCusker's Textile Process Co.; new firm; lease Black Rock Mill, formerly run by Quaker Braid Co.; specialize in fast colors; capacity 8,000 lbs. per week.

Providence. Industrial Braid Co.; establish plant at 415 Charles St.; 156 braiders.

Tennessee, Chattanooga. Central Franklin Process Co.; new plant containing approximately 41,000 sq. ft. of floor area; practically exact duplicate of Greenville plant.

Virginia, Roanoke. Loebl Dye Works, Inc.; incorporated for $25,000; start operations in brick plant at 348 Salem Ave.

Washington, Vancouver. Washington-Oregon Linen Mills, Inc.; lease plant; will have 3,200 spindles and 60 looms for initial operations.

Wisconsin, Milwaukee. Maley-Miller Mfg. Co.; capitalized at $10,000; lease space at 387 Tenth St. and equip for making wool comforters, batting and wadding.

Enlargements and Improvements

COTTON

Alabama, Geneva. Geneva Cotton Mills; construct new cloth room, one story, 40 x 80 ft.; add 1,600 spindles and 44 40-in. looms and complementary equipment.

Lanett. West Point (Ga.) Mfg. Co.; build four-story and basement cloth warehouse 100 x 120 ft. for Lanett Mill.

Ozark. Dale Cotton Mills; purchase Ozark Cotton Mill and give general overhauling.

Piedmont. Standard-Coosa-Thatcher Co.; complete two-story, 85 x 103 ft. extension, increasing capacity from 25 to 30%. (Work started last year.)

Union Springs. Cowikee Mills; install 1,000 additional spindles.

California, Redlands. John H. Hodson Co., Inc.; move into new mill 50 x 65 ft., with adjoining dyehouse and boiler room; install 4 new looms.

Connecticut, East Hampton. Summit Thread Co.; build one-story, brick and steel mill addition.

Middletown. Burns Lace Mfg. Co.; install three new looms each capable of producing five pieces of 36-in. goods at one time; also start lace curtain making department with 24 machines.

Middletown Russell Mfg. Co.; build one-story, 25 x 50 ft. brick warehouse.

Middletown. Wilcox Lace Mfg. Co.; new addition for carding, finishing and bleaching; one story high, 22 x 116 ft.; also start curtain and drapery manufacturing department.

Moosup. Aldrich Bros. Co.; build new weave shed to house 500 looms; also 6 new houses for operatives.

Shelton. Adams Mfg. Co.; construct 40 x 50 ft. extension, two stories high, at cost of about $20,000.

Georgia, Athens. Star Thread Mills; install 50 dobby looms for manufacture of fancy dress goods and draperies.

Calhoun. Echota Cotton Mills; erect 84 x 77 ft. addition to be used as warper and slasher room; one story and basement.

Carrollton. Carroll Mills; install 50 braiding machines for production of flat and tubular braid.

Columbus. Columbus Mfg. Co.; make various improvements and enlargements to plant, including extension to cloth room; 15,000 sq. ft. additional floor space; necessary cloth room equipment.

Columbus. Muscogee Mfg. Co.; plan five-story addition; L-shaped, 193 x 115 ft. and 108 x 54 ft., of reinforced concrete, steel and brick.

Columbus. Swift Spinning Mills; erect modern building to facilitate inspection and grading of cotton.

Commerce. Harmony Grove Mills; erect new cloth room, 70 x 44 ft., and add 48 looms.

Dalton. American Thread Co. of Georgia; complete first unit of plant started last year; 30,000 spindles.

Dalton. Boylston-Crown Mills; formed to operate Elk Cotton Mills; erect 200 ft., two-story addition to plant; also 40 cottages, approximately double capacity.

Eastman. Eastman Cotton Mills; install 20 additional broad looms, 4 spinning frames, 2 cards and complimentary equipment.

Egan. Piedmont Cotton Mills; build 50-ft., one-story and basement addition to cloth room.

Griffin. Highland Mills; complete mill started last year; 12,500 spindles and 500 looms.

Habersham. Habersham Mills; construct $150,000 hydro-electric plant.

Hampton. Ensign Cotton Mills (Forsyth, Ga.); purchase Hampton Cotton Mills and operate as plant No. 2.

Hawkinsville. Cochran Mill No. 2; install 2,000 new spindles and 25 90-in. looms; overhaul old machinery; erect new steam plant.

La Grange. Elm City Cotton Mills; erect two-story brick cloth room and cloth storage building; Elm City Cotton Mills, Hillside Cotton Mills, Unity Cotton Mills, Unity Spinning Mill and Valley Mills, of LaGrange, and Manchester Cotton Mills, Manchester, completely electrified.

La Grange. Unity Cotton Mills; build opener room and small addition to main plant; rearrange machinery and install double later breaker lappers.

Lavonia. Lavonia Cotton Mfg. Co.; make additions and improvements, including construction of new raw stock dyehouse, one story, 50 x 66 ft.; new warehouse having two compartments, 50 x 100 ft.

Macon. Atlantic Cotton Mills; purchase plant of Manchester Mfg. Co.

Marietta. Willinca Cotton Mills; take over Marietta Cotton Mills and start production of 6s to 20s cotton yarns after overhauling machinery.

Middleton. Beaver Cotton Mills; new name for plant of Pitts Mfg. Co. purchased by Frank W. Van Ness and Associates; manufacture carded yarns in 2s to 12s, single and ply.

Newnan. McIntosh Mills; mill addition 192 x 75 ft. erected to house 5,000 new spindles and complementary machinery.

Roswell. Roswell Mills, Inc.; construct addition and install 32 new cards and auxiliary machinery; also install dyeing and bleaching plant.

Social Circle. Social Circle Cotton Mills Co.; electrify plant; add 3,400 spindles and 52 wide looms.

Tifton. Tifton Cotton Mills; build extension to house 5,000 additional spindles.

Trion. Trion Co.; install 100 new 40-in. looms.

Union Point. Union Mfg. Co.; replace old wooden dyehouse with new brick structure, 60 x 90 ft.

Kentucky, Louisville. Louisville Textile Co.; build extension to mill at cost of about $5,000; add 12 looms.

Maine, Biddeford. Pepperell Mfg. Co.; install 80 new spinning frames to replace ones shipped to company's new plant at Opelika, Ala.; purchase controlling interest in Lewiston, (Me.) Bleachery & Dye Works.

Brunswick. Cabot Mfg. Co.; install 100 new broad and 308 narrow looms.

Westbrook. Edelstone Bros. Fabric Mills, Inc.; purchase Armory Bldg. and Lisk Bldg., make alterations; install machinery for manufacture of tire fabrics and twine in Armory Bldg. and use Lisk Bldg. for warehouse.

Massachusetts, Easthampton. Geo. S. Colton Elastic Web Co.; build mill addition; three stories and basement, 54 x 152 ft.

Fall River. Annawan Mills, Inc.; purchase Grinnell Yarn Mills.

Fall River. Davol Mills; install 8 combers, 1 ribber, 1 sliver doubler and 4 winders.

Fall River. Firestone Cotton Mills; install approximately $250,000 worth of new machinery, increasing production about 20%.

Fall River. Stevens Mfg. Co.; install two 2,400-needle jacquards, silk winding machinery, about 30 chain warpers and yarn dyeing equipment.

Malden. Multiple Winding Co.; take over business and equipment of Domestic Mills Co., Lowell, and move machinery to Malden.

New Bedford. Nashawena Mills; purchase Manomet Mill No. 3 and erect two-story brick building adjacent to same, to house 1,680 40-in. looms and warp preparatory machinery.

New Bedford. Neild Mfg. Corp.; extend plant 191 x 112 ft., making room for 200 more looms.

New Bedford. New Bedford Spinning Co.; controlling interest purchased by Indian Co.; install number of new looms.

New Bedford. Wamsutta Mills; sell approximately 12,000 mule spindles to make room for silk and rayon processing plant in one of main buildings; install winders, warpers, etc., to handle 10,000 lbs. weekly of rayon and silk; add 32 looms; install 2,000 spindles for long draft spinning; electrify Mill No. 6.

Taunton. City Mfg. Corp. (New Bedford, Mass.) purchase Taunton plant of Amalgamated Silk Corp. and convert into weaving mill.

Waltham. Boston Mfg. Co.; install 200 new jacquard looms.

New Hampshire, Manchester. Amoskeag Mfg Co.; merge with Parkhill Mfg. Co., Fitchburg, Mass.; complete new worsted dyehouse started last year; install machinery for production of rayon; 1,200 box looms changed over to dobbies.

New Jersey, Clifton. Pennsylvania Textile Mills, Inc.; construct brick addition, 65 x 165 ft., one story high; cost $52,000.

Millville. Millville Mfg. Co.; build reinforced concrete addition, two stories, 60 x 185 ft.

Paterson. Durwyllan Co.; erect new one-story, 120 x 140 ft. mill on Kentucky Ave.; will move machinery to new building and add new looms.

New York, Buffalo. Globe Woven Belting Co., Inc.; build brick and steel addition at cost of about $21,000; one-story, 78 x 100 ft.

Long Island City. Cornellist Textile Corp., Ravenswood Dye Works, Inc., and C. R. Finishing Corp. combined under name of Cornellist, Inc.

New Rochelle. Maurice Levy Co., Inc.; construct dyehouse addition; one-story, 50 x 100 ft.; cost $50,000, including equipment.

Oswego. Oswego Yarn Mills, Inc.; install additional new machinery to increase output about 25%.

Utica. Dunlop Tire & Rubber Corp. of America; purchase Utica Spinning Mill and continue production of cord tire fabrics.

North Carolina, Central Falls. Pennsylvania Textile Mills, Inc.; build new card room and 12 operatives' houses.

Charlotte. Carl Stohn, Inc.; lease extra floor space and install 24 additional looms.

Cherryville. Rhyne-Houser Mfg. Co.; build mill addition; two stories, 75 x 128 ft., add 5,000 spindles.

Cherryville, Wildan Mfg. Co.; new company capitalized at $200,000; purchase Cherryville plant of Melville Mfg. Co.

Cliffside. Cliffside Mills; construct new finishing plant; three stories, 243 x 50 ft.

Concord. Brown Mfg. Co.; construct new two-story, 100 x 80 ft. weave shed; old weave shed used as spinning room and additional frames installed.

Concord. Locke Cotton Mills Co.; build new brick and concrete boiler house and install 3 new boilers.

Cramerton. Cramerton Mills, Inc.; construct complete wet finishing plant.

Cumberland. Cumberland Mills, Inc.; organized with capital of $300,000 to operate plant of Corley Mills, Inc.

Franklinville. Randolph Mills, Inc.; build addition to house bleaching and dyeing equipment; install new equipment.

Gastonia. Ranlo Mfg. Co.; construct 44 x 130 ft. extension on main mill building; 15 houses for operatives; install 10 additional twisters and 4 looms.

Gibsonville. Minneola Mfg. Co.; complete new weave shed, 192 x 228 ft., started last year; install additional machinery and make other improvements.

Graham. Travora Mfg. Co.; build new office building at cost of about $8,000.

Greensboro. Proximity Mfg. Co.; erect six-story reinforced concrete warehouse; install second unit of equipment for dyeing warps indigo by continuous method.

Henry River. Henry River Mfg Co.; install new spindles, additional cards, roving frames and twisters, also add combers; will make fine combed yarn, 70s to 80s for mercerizing.

Hickory. A. A. Shuford Mill Co.; build 300-ft. addition, one story and basement high.

High Point. Highland Cotton Mills; erect two-story 200 x 67 ft. extension and install machinery for 40s to 60s ply yarns.

Kannapolis. Cannon Mfg. Co.; construct two-story, 50 x 50 ft. extension to office building; plan 50,000-spindle addition; three story, 600 x 100-ft. building; also 150 tenement houses.

King's Mountain. Dilling Cotton Mills; build weave shed for 150 looms; one-story, 100 x 135 ft.

Landis. Corriher Mills Co.; erect two two-story standard mill buildings, 100 x 200 ft. and 40 x 80 ft., to house 11,000 additional spindles and complementary equipment; also houses for operatives.

Lincolnton. Boger & Crawford; install 3,000 additional spinning spindles and a gassing plant; construct 200,000 gal. water reservoir and 11 new dwellings for employes.

Marion. Cross Cotton Mills Co.; build extension to house 6,000 spindles but only 5,000 installed at this time; also 25 cottages for operatives.

Mt. Holly. Catawba Spinning Co.; erect new dye plant and install new machinery.

Mt. Pleasant. Tuscarora Cotton Mill; construct new office building.

Paw Creek. Thrift Mills of Kendall Mills, Inc.; install 2,000 additional new spindles and 108 looms; erect 18 houses for operatives and improve village.

Raleigh. North Carolina State College; extend textile building at cost of $50,000.

Randleman. Deep River Mills, Inc.; construct two-story dyehouse, 50 x 140 ft.; install 2 dyeing machines, 2 slashers, 4 beam warpers.

Roxboro. A. T. Baker & Co., Inc.; build 100 x 100 ft. extension and equip with 30 additional looms.

Salisbury. Rowan Cotton Mills Co.; enlarge plant to house 10,000 new spindles and preparatory equipment.

Smyth (Balfour) Balfour Mills, Inc.; add 8,000 new spindles and 100 looms; build and equip new 1250 KVA steam electric power plant; also 25 new houses.

Spindale. Horn Co.; install 32 20-harness dobby looms.

Spindale. Spencer Mills Co.; complete weave shed started last year, a 135 x 140 ft. structure, and install 150 looms as planned.

Stanley. Lola Mfg. Co.; approximately double floor space of dyeing department by building addition.

Swannanoa. Beacon Mfg. Co.; complete branch mill and village started last year; main building 800 x 165 ft.; about 65 cottages.

Valdese. Waldensian Weavers, Inc.; start producing draperies in plant acquired last year; initial equipment, 84 looms; later build addition to practically double capacity.

Oklahoma, Sand Springs. C. R. Miller Mfg. Co. of Okla. (subsidiary of C. R. Miller Mfg. Co., Dallas, Tex.); purchase Sand Springs Cotton Mill; build new bleachery with capacity of about 150,000 yds. per week.

Pennsylvania, Philadelphia. American Pile Fabric Co. (Frankford); erect mill addition at cost of $4,700.

Philadelphia. A. T. Baker & Co., Inc. (Manayunk); build new storehouse costing approximately $50,000 and centralize storage facilities, heretofore scattered, also erect new dyehouse at cost of $15,000.

Philadelphia. Baxter, Kelly & Faust, Inc.; build two additional stories on two-story building, at cost of $96,000.

Philadelphia. Bolger Bros. (Germantown); erect new building at cost of $40,000.

Philadelphia. Brooks Bros. Co., Inc.; construct three-story and basement addition to mill and install 50 new looms.

Philadelphia. Craftex Mills, Inc.; build addition costing $20,000.

Philadelphia. Ionic Mills; lease additional floor and increase capacity.

Philadelphia. Kaufman Plush Co. (Manayunk); construct dyehouse addition to double capacity of this department.

Philadelphia. LaFrance Textile Industries (Frankford); erect new dyehouse costing $4,000; absorb Velseal Plush Co., which built $30,000 addition.

Philadelphia. Madison Spinning Co.; build one-story addition costing $10,000; install picker house machinery.

Philadelphia. Andrew Y. Michle; purchase business of J. Turner & Co., Germantown, and operate as branch plant.

Philadelphia. Whitehall Textile Co. (Frankford); complete removal of machinery to Wheatsheaf Lane and Penn R. R.; add 30 looms, doubling capacity.

Philadelphia. Wissahickon Plush Mills; install 12 additional looms.

Chester. Ewing-Thomas Converting Co.; purchase building formerly occupied by Chester Spinning Mills and move equipment from Quakertown mill to Chester; also install additional machinery.

Chester. Nell-A-May Plush Co.; buy property and equipment of S. A. Crozer & Son and move machinery to lately acquired mill; add about $10,000 worth of new machinery.

Columbia. Columbia Lace Co.; build three-story, 50 x 58 ft. addition.

Scranton. Scranton Lace Co.; erect three-story mill, 62 x 175 ft., for warping and winding and one-story building, 57 x 128 ft. for general operating service; remodel bleachery; add new machinery.

Souderton. Cheltenham Towel Mills, Inc. (Philadelphia plant destroyed by fire); purchase Souderton Towel Works.

Upland. Rosanna Mill, Inc. (Chester); purchase plant and machinery of S. A. Crozer & Son, at Upland.

Rhode Island, Albion. Valley Falls Co.; install 100 additional looms for silk goods.

Pawtucket. Lorraine Mfg. Co.; build one-story, 30 x 30 ft. office building costing between $3,000 and $3,200.

Pawtucket. Moore Fabric Co.; one-story brick addition costing $30,000; 100 x 120 ft.

Pawtucket. Potter Fine Spinners, Inc.; install 160 looms for broadcloth and other fine goods.

Pawtucket. Rhode Island Web Co.; move to new plant at 121 Bacon St.; add 200 braiders.

Pawtucket. Royal Weaving Co.; start construction of new brick weave shed; one story, 25 x 99 ft.; cost $90,000; will add 300 looms.

Westerly. Clyde Mills, Inc.; add 24 looms to equipment.

Westerly. George C. Moore Co.; enlarge plant by erecting 60 x 154 ft. mill addition, three stories high.

South Carolina, Anderson. Appleton Mfg. Co.; purchase Brogon Mills; will transfer 30,000 spindles from plant of Appleton Co., Lowell, Mass., and erect two-story building for dyehouse, bleachery and warehouse.

Anderson. Gluck Mills; build 50 x 100 ft. extension to warehouse; additional floor space equipped as cloth room.

Anderson. Orr Cotton Mills; award contract for 25 new operatives' houses.

Anderson. Riverside Mfg. Co.; award contract for 15,000 sq. ft. mill addition.

Anderson. Toxaway Mills; start construction of new weave shed to have 50,000 sq. ft. of floor space.

Carhartt. Red River Cotton Mills Co.; new company; purchase Mill No. 2 of Hamilton Carhartt Cotton Mills; repair and adjust machinery; add necessary new equipment; build 25 houses for operatives.

Clinton. Lydia Cotton Mills; complete three-story, 125 x 280 ft. addition started

last year; add 8,000 spindles and 100 46-in. automatic dobby looms.

Fingerville. Franklin Process Spinning Mill; install 2,268 additional spindles, electrify entire mill and erect 35 new houses for operatives.

Fort Mill. Fort Mill Mfg. Co.; erect 10 houses for operatives.

Goldville. Joanna Cotton Mills; complete two-story addition started last year and equip with 12,096 spindles; begin construction of 50 additional cottages for employes.

Greenville. Judson Mills; acquire plant of Shambow Shuttle Co. on Easley Bridge Rd., build two-story, 120 x 133 ft. extension and install 150 wide silk looms; construct 50 houses for operatives.

Greenville. Victor-Monaghan Co.; install 72 looms in Monaghan Plant; build two-story structure, first floor for grocery and mail order department; second story for lodge rooms.

Kershaw. Kershaw Cotton Mills; build new weave shed, one story, 133 x 400 ft., costing $100,000; also turbine room, warehouse and opener room, at cost of $45,000; add 21 new cards, 12,160 spindles, 118 automatic looms.

Lancaster. Lancaster Cotton Mills; expend approximately $200,000 on improvements to equipment, including installation of turbine unit and improvement of steam plant.

Spartanburg. Martel Mills, Inc.; complete three-story, 100 x 200 ft. extension to Valley Falls Mill and 25 houses for operatives; will install 7,500 spindles and 116 looms.

Spartanburg. Wadsworth Mills; incorporated for $300,000; take over and start operation of former Spartanburg County Mills.

Union. Excelsior Mills; complete three-story, 116 x 146 ft. weave shed started last year and install 214 looms; purchase yarn mercerizing plant of Cherokee Spinning Co., Knoxville, Tenn.

Walhalla. Kenneth Cotton Mills (formerly Oconee Mfg. Co.); install 50 looms for fancy bed spreads; erect new packing and shipping building, 40 ft. square, one story high.

Whitmire. Aragon-Baldwin Cotton Mills, Inc.; erect 50 new houses for operatives; install new spooler, warper and 200 additional looms.

Tennessee, Chattanooga. Dixie Mercerizing Co. and Dixie Spinning Mills consolidated under name of Dixie Mercerizing Co.; construct 108 x 160 ft., two-story addition to spinning mill and install 3,000 more spendles; two 50 x 100 standard warehouses, a school house, office building, 2 cotton ageing bins and 25 cottages; award contract for extension to spinning mill, 150 x 105 ft., two stories, to be equipped with additional 8,000 spindles; build one-story, 103 x 108 ft. extension for shipping, yarn conditioning and winding.

Chattanooga. Standard-Coosa-Thatcher Co.; build additional story on cotton warehouse and install picker machinery there; add second story to shipping building; additional machinery in mercerizing plant.

Johnson City. Gloria Textile Corp.; complete plant and start operations with 200 looms; plan to add 120 looms. Building begun last year.

Kingsport. Borden Mills, Inc.; finish building plant started last year; 88,000 spindles and 1,940 looms transferred from Mills No. 6 and 7 of American Printing Co., Fall River, Mass.

Knoxville. Knoxville Cotton Mills; construct new dyehouse, one story, 65 x 80 ft. and equip with new machinery.

Prendergast. Southern Cotton Mills Co.; take over and enlarge Prendergast Cotton Mills; add 42 cards, 12 speeders and 6 intermediates.

Shelbyville. Shelbyville Mills, Inc.; purchase Sylvan Cotton Mills; plan 190-ft. extension to mill building.

Texas, Dallas. C. R. Miller Mfg. Co.; acquire plants of Texas Cotton Mill Co., in McKinney, Tex. and Dallas Textile Mills, Dallas; plan to install additional spindles in both plants.

Marble Falls. Marble Falls Textile Mills Co.; proceed with improvement of plant, installation of machinery and building of mill village; 15,000 spindles. Work started last year.

Mexia. Mexia Textile Mill; complete plant, and start making flat duck; 5,000 spindles; 128 looms. Construction begun last year.

Sherman. Sherman Mfg. Co.; install 24 new automatic looms; 12 of these replace old looms and 12 increase capacity; install 6 electric motors.

Vermont, Burlington. Queen City Cotton Co.; change over about one-half of equipment for manufacture of combed yarn, fine and fancy goods of silk and cotton; new equipment cost $300,000.

Canada, Woodstock, Ont. La France Textile Industries; add 14 looms to equipment.

Montmorency Falls, Que. Dominion Textile Co., Ltd.; build five-story, 260 x 105 ft. extension to Montmorency Cotton Mills; rearrange old machinery and install some new.

WOOL MILLS

Connecticut, Buckland. E. E. Hilliard Co., Inc.; erect three-story brick and steel unit 78 x 227 ft., for carding, spinning and finishing departments.

Cos Cob. Dent Woolen Co.; capital $100,000 pfd., $100,000 common; purchase plant and equipment of Mianus Woolen Co. and start operations.

Glastonbury. Angus Park Mfg. Co.; build 60-ft. extension to weave room and install additional equipment.

Norwalk. Lounsbury & Bissell Co.; erect additional story, 35 x 80 ft. on manufacturing building.

Norwich. New England Mills Co.; construct brick and steel addition, two stories high and increase equipment to 40 looms; also build new brick boiler house.

Rockville. Hockanum Mills Co.; brick and timber addition 66 x 80 ft.; primarily for warehouse service.

Somerville. Somerville Mfg. Co.; add new tape condenser and 8 looms.

Stafford Springs. Warren Woolen Co.; build new reinforced concrete dye house having about 20,000 sq. ft. of floor space; three-story structure, 70 x 100 ft.

Waterford. Jordan Mills; install 6 additional new looms.

Delaware, Stanton. Novel Woolen Mills (successors to Kiamensi Woolen Co.); install additional machinery.

Georgia, Rossville. Peerless Woolen Mills; start construction of one-story extension, 140 x 460 ft., to house 100 new broad looms.

Indiana, La Porte. Samuel Fox's Sons, Inc.; build three-story and basement addition, 30 x 105 ft., at cost of about $50,000.

Maine, Camden. Seabright Woven Felt Co.; new spinning and weaving addition, four stories high, 114 x 96 ft.

Dexter. George Park Mfg. Co.; purchase plant of Wassookeag Woolen Co. and continue operations; add 8 looms.

Lewiston. Columbia Woolen Co.; lease additional property having about 40,000 sq. ft. of floor space; remodel and improve for mill extension.

Lisbon Centre. Farnsworth Co.; extend weave shed and install 20 new automatic looms.

Oxford. Robinson Mfg. Co.; add 5 looms.

Sabattus. Park Mills, Inc.; erect new power house at cost of approximately $30,000.

Skowhegan. Daniel E. Cummings Co.; take over former plant of Maine Spinning Co. and other buildings, remodel and install equipment to approximately double capacity.

Winthrop. Winthrop Mills Co.; build four-story, 64 x 203 ft. addition to main mill and equip with 100 new looms; also 8 two-story frame houses for employes.

Massachusetts, Andover. M. T. Stevens & Sons Co.; build 260 x 70-ft. addition to Marland Mills.

Clinton. Roubaix Mills, Inc.; erect new one-story brick machine shop, 52 x 110 ft. at cost of about $12,000, to replace one destroyed by fire; also new weave shed with floor area of 20,000 sq. ft., having capacity for 144 looms.

Hinsdale. Strong, Hewat & Co. (North Adams, Mass.); take over Hinsdale Woolen Mills, Inc.

Hudson. Hudson Worsted Co.; start branch known as Mill No. 2; equip with 3 cards, 4 combs and complementary machinery.

Jefferson. Jefferson Mfg. Co.; new carding and spinning building, two stories and basement, 208 x 85 ft., erected at cost of about $100,000.

Millbury. Felters Co.; build one-story, brick and steel addition to plant.

Millbury. Millbury Spinning Co., Inc.; construct new storehouse; one story high, 40 x 30 ft.

Monson. A. D. Ellis Mills, Inc.; erect 125 x 91 ft. addition to contain boiler house, dye house, engine room and wool sorting room.

Monson. Monson Associates, Inc.; organize and start operation of plant formerly run by Monson Worsted Co.

Newton. Newton Wool Scouring Co.; build extension to plant; one story, 60 x 120 ft.

Northboro. Northdale Woolen Mills, Inc.; purchase plant of Northboro Woolen Co.

North Uxbridge. Rivulet Spinning Co. (Uxbridge Worsted Co., Inc.); transfer spinning department from North Uxbridge to Glenark Mill in Woonsocket, R. I., and install 4 sets cards and 80 looms in former plant.

Oxford. David N. Taft (Bernon Mill); add one set of cards and 16 looms.

Pittsfield. Pontoosuc Woolen Mfg. Co.; new carding and spinning addition of steel and concrete, 165 x 85 ft., three stories high.

Uxbridge. Uxbridge Worsted Co.; award contract for addition to house 48 looms and auxiliary equipment.

Uxbridge. Waucantuck Mills, new picking, carding and spinning addition; two stories high, 59 x 90 ft.

West Medway. Stone Mill Co.; build reinforced concrete and steel extension, two stories high, 75 x 75 ft.

Worcester. Bell Co.; move equipment from 58 Commercial St. to building on Millbrook St., having 250,000 sq. ft. more floor space; install additional machinery.

Worcester. M. J. Whittall Associates; build two brick additions for manufacturing purposes; two stories, 15 x 36 ft. and one story, 11 x 21 ft.

Michigan, Yale. Yale Woolen Mills; new dyehouse; one story, 46 x 100 ft.; cost about $50,000.

Minnesota, Minneapolis. North Star Woolen Mill; construct addition over and around old building.

New Hampshire, Claremont. Dartmouth Woolen Mills, Inc.; incorporated for $200,000; purchase two mills formerly operated by John Roberts; build additional story to picker house.

Newport. Brampton Woolen Co.; build dyehouse and hydro-electric addition.

Newport. Gordon Woolen Mills, Inc.; take over and resume operation of mill of Dexter Richards & Sons Co.

New Jersey, Bound Brook. Middlebrook Mills, Inc.; acquire and improve Bound Brook Woolen Mills.

Freehold. A. & M. Karagheusian; erect steel and concrete addition, four stories, 86 x 168 ft.; also overhead bridge connecting old and new structures.

New York, Albany. Albany Felt Co.; build brick addition for manufacturing purposes; three-story, 35 x 50 ft.

Albany. F. C. Huyck & Sons; erect concrete and steel warehouse at cost of $13,000.

Amsterdam. Mohawk Carpet Mills, Inc.; extend Mill No. 3 of McCleary, Wallin & Crouse Branch, giving 8,000 sq. ft. of additional floor space for warehouse purposes; also build small addition to Shuttleworth Branch.

Glenham. Braeburn Woolen Co., Inc.; construct two-story 125 x 65 ft. dyehouse.

Newburgh. Crex Carpet Co.; build new weave shed; one-story and basement, 67 x 200 ft., at cost of $100,000; add 12 looms.

Rensselaer. Rensselaer Woolen Mills; buy out M. Boyne, of Philmont, N. Y.; start operations in Rensselaer, garnetting of wool, cotton and merino shoddies; install additional machinery.

Shushan. J. E. Ashworth's Sons (Westbrookville N. Y.); purchase Eagleville Woolen Mill for branch plant; equip with 600 woolen spindles, 2 sets wool cards and 9 broad looms.

Yonkers. Alexander Smith & Sons Carpet Co.; erect four-story reinforced concrete addition, 60 x 143 ft. at cost of about $160,000, with equipment; also new one-story power plant.

North Carolina, Charlotte. Leaksville Woolen Mills; build one-story, 27 x 54 ft. extension to plant; also 25 new cottages for operatives.

Mt. Airy. Miltex Woolen Mills, Inc.; capitalized at $100,000; purchase Alpine Woolen Mills and plan enlargement.

Ohio, St. Mary's. St. Mary's Woolen Mfg. Co.; build three-story and basement brick addition; primarily for warehouse service.

Oregon, Portland. Oregon Worsted Co.; construct mill addition at cost of approximately $13,500; 90 x 113 ft.

Pennsylvania, Philadelphia. Artloom Corp.; incorporated with capital of $3,000,000 pfd. and 200,000 shares common stock, no par value, to take over plants and business of Philadelphia Tapestry Mills, Artloom Rug Mills and Philadelphia Pile Fabric Mills.

Philadelphia. Franklinshire Worsted Mills; purchase plant at corner 3d and Westmoreland Sts., formerly occupied by Bernstein Mfg. Co.; make alterations and improvements at cost of about $25,000; move equipment to new quarters and add 50 looms.

Philadelphia. Gem Textile Mfg. Co.; move to Howard and Berks Sts.; install 20 additional looms.

Philadelphia. Hardwick, Magee Co.; make alterations to mill, dyehouse and offices and build addition to boiler house; also construct two-story bridge connecting two buildings.

Philadelphia. John Zimmerman & Sons, Inc.; erect new plant at Torresdale Ave. and N St.; main building four stories, 62 x 175 ft.; dyehouse one story, 70 x 80 ft.; power house, 30 x 40 ft.; cost about $100,000.

Bloomsburg. Magee Carpet Co.; build three-story and basement printing building, 66 x 51 ft. and two-story, 65 x 28 ft. bridge building over driveway; also 8 three-story and basement residences.

Carlisle. C. H. Masland & Sons, Inc.; construct new storage building and machine shop.

Rhode Island, Central Falls. Stokes-Brooks Worsted Co.; move from Pawtucket to Central Falls where have approximately double former floor space; add 10 new looms.

Harrisville. Stillwater Worsted Mills; build two-story, 100 x 50 ft. addition to Mill No. 3; also one-story, 24 x 236 ft. extension; purchase plant of Namquit Worsted Co., Greenville, R. I., and considerable of the machinery, make improvements and reopen plant; buy Lockwood Mills, formerly operated by Mystic Mfg. Co., Ashaway, R. I., and start operating.

Lafayette. Rodman Mfg. Co.; install 10 additional broad looms; electrify picker and dye houses.

Oakland. Oakland Worsted Co.; build brick addition, two stories, 75 x 85 ft.; top floor for weave shed; lower for storage service.

Pascoag. Continental Worsted Co.; purchase Arkela Mill of A. L. Sayles & Sons Co.; improve and start up.

Providence. Rhode Island Rug Works; build one-story, 100 x 214 ft. reinforced concrete storehouse.

Wakefield. Wakefield Textile Co.; construct new fireproof storehouse, one story high, 172 x 42 ft.

Woonsocket. Belmont Woolen Yarn Mills; erect brick mill addition, two stories, 50 x 100 ft.; add 4 mules and 1 set of cards.

Woonsocket. Bonin Spinning Co.; build mill construction addition, two stories, approximately 25 x 75 ft., costing about $10,000.

Woonsocket. Jules Desurmont Worsted Co.; erect one-story concrete warehouse, 174 x 84 ft. and a repair shop, 64 x 84 ft.

Woonsocket. Dunn Worsted Mills; construct brick addition, two stores, 45 x 135 ft., to give more space to dressing room; install 40 new automatic looms to replace old.

Woonsocket. French Worsted Co.; build concrete mill addition.

Woonsocket. Glenbrook Worsted Mills; start construction of storage addition, one story high, 40 x 60 ft.

Woonsocket. Samoset Worsted Mills; erect office building, 31 x 42 ft., costing $18,000; also 21 x 39 ft. garage.

Woonsocket. Uxbridge Worsted Co.; add three floors to boiler house; construct brick transformer house, 10 x 15 ft.; install 2,800 additional worsted spindles in part of Glenark Mill formerly occupied by Manchester Co.

Tennessee, Chattanooga. Hardwick Woolen Mills; build two-story, 40 x 50 ft. extension to machine shop and opening room.

McMinnville. Tennessee Woolen Mill Co.; install 20 additional new broad looms and change production from jeans to blankets exclusively; build two-story extension for napper and finishing room.

Murfreesboro. Murfreesboro Woolen Mills; construct two-story brick warehouse.

Sweetwater. Sweetwater Woolen Mills; erect two-story, 168 x 36 ft. addition to finishing plant; a 42-ft. extension to dyehouse, and install new boiler.

Utah, Salt Lake City. Utah Woolen Mills; start erection of two-story and basement addition, 40 x 90 ft., to cost about $35,000.

Vermont, Proctorsville. Proctor Woolen Mills, purchase plant of Murdock Woolen Mills Co. and resume operations there.

Saxtons River. Saxtons River Mills, Inc., incorporated for $36,000 to take over and operate mill of Saxtons River Woolen Co.; improve plant and install additional looms and dyeing equipment.

Virginia, Norfolk. Virginia Worsted Co., install 400 additional spindles.

Winchester. Arthur G. Jones Woolen Mills Corp.; take over Winchester Woolen Mills; start construction of new dyehouse; plan mill addition and new boiler house.

Washington, Washougal. Washougal Woolen Mills; add 1 set of cards and 4 broad looms.

Wisconsin, Grafton. Badger Worsted Mills; add 576 worsted spindles and 1 comb.

La Crosse. North Side Yarn Mills; incorporated for $25,000; erect 40 x 60 ft. addition to house 3 sets cards; also new picker house, 30 x 40 ft.

Canada, Renfrew, Ont. M. J. O'Brien, Ltd.; purchase plant of Logan Woolens, Ltd.; make necessary changes and improvements.

KNITTING MILLS

Alabama, Fort Payne. W. B. Davis & Son; build additional story on mill at cost of about $18,000.

Scottsboro. Scottsboro Hosiery Mill, Inc.; purchase two buildings and approximately double output of silk and rayon half hose.

Arkansas, Pine Bluff. Arkansas Textile Co.; start operations in plant acquired last year; initial equipment of 10,000 spindles, 80 knitting and 100 sewing machines moved from Amsterdam, N. Y., plant of John K. Stewart & Sons; later transfer 6,000 more spindles to new location.

California, Los Angeles. Manchester Knitting Mills, Inc.; install four additional knitting machines for production of sweaters.

Connecticut, Hartford. Laurel Silk Hosiery Co., Inc.; build extension; two stories high, 20 x 35 ft.; install additional machinery.

Seymour. Tingue Mfg. Co.; brick mill addition, 40 x 120 ft.; also new brick front built on old building.

Shelton. Shelton Knitting Co.; purchase business of L. A. O'Lena, of Brooklyn, N. Y.; move machinery to plant at Warf and Hull Sts., Shelton; add new knitting machinery.

Torrington. Severin Bros., Inc.; change name to Severin Mfg. Co.; construct three-story brick and steel mill addition.

Georgia, Barnesville. Wm. Carter Co.; build new bleachery and install additional equipment at cost of about $15,000.

Columbus. Perkins Hosiery Mills; add 2,500 spindles and auxiliary machinery.

Dallas. Dallas Hosiery Mills; install machinery to almost double capacity of dyeing plant.

Grantville. Grantville Hosiery Mills; build two mill additions, 132 x 218 ft., and 227 x 26 ft.; also a 100 x 120 ft. dyehouse.

Illinois, Chicago. Glasgow Knitting Mills; move from 1021 Milwaukee Ave. to own building at 1101 N. Robey St.; add 2 knitting machines and 1 sewing machine.

Rockford. Forest City Knitting Co.; one-story and basement addition, 87 x 125 ft. erected at cost of about $45,000.

Rockford. Nelson Knitting Co.; start construction of one and two-story addition, 170 x 320 ft., to cost about $200,000 with equipment.

Indiana, Indianapolis. Real Silk Hosiery Mills; build two-story top addition, 90 x 100 ft., to mill and complete new dye house, one and two stories, 50 x 110 ft., started last year; purchase control of Thieme Bros. Co., Fort Wayne, Ind.; organize subsidiary company, Real Silk Lingerie Corp., to manufacture glove silk, rayon and crepe de chine garments; install about $150,000 worth of new machinery in top addition.

Iowa, Des Moines. Rollins Hosiery Mills; erect one-story, 100 x 150 ft. building and equip with machinery for full-fashioned hosiery.

Maryland, Hagerstown. Shalwin Hosiery Mills; erect new three-story mill; remove

equipment to new quarters and install some full-fashioned machinery.

Massachusetts, Cambridge. Chandler Mfg. Co.; build three-story extension, 40 x 105 ft., to Cambridge knitting mill.

Chicopee Falls. Taylor-Bramley Co.; construct three-story mill addition having 3,500 sq. ft. of floor space, at cost of about $10,000.

Holyoke. Holyoke Silk Hosiery Co.; build three additional stories on plant; will install 4 new full fashioned knitting machines.

Holyoke. McCallum Hosiery Co.; purchase property of Goetz Silk Mfg. Co. and transfer machinery from plant at 140 Race St. to Goetz mill.

Malden. Cub Knitting Mills; install new machinery to increase production about 50 per cent.

Minnesota, Minneapolis. Strutwear Knitting Co.; build one-story and basement addition, 60 x 130 ft., at cost of about $25,000.

New Hampshire, Laconia. G. H. Tilton & Son Co.; purchase mill of J. W. Busiel & Co., at Laconia.

Lebanon. Norfolk Knitting Mills Corp., Littleton, N. H., and Everett Knitting Works, Lebanon, consolidated and operated under one roof.

New Jersey, Bloomfield. Brilliant Silk Hosiery Co., Inc.; erect mill addition, two stories, 92 x 100 ft., cost $40,000; also make alterations and improvements in old building at cost of $10,000; install 8 24-section machines.

Boonton. Van Raalte Co.; build one-story mill addition, 45 x 120 ft. and install 4 new machines; plan to add between 30 and 40 machines during 1926.

Clifton. Conrad Hosiery Co.; install 5 additional full-fashioned knitting machines, 1 looper, 1 sewing machine.

Hawthorne. Excello Hosiery Co.; build addition to approximately double capacity; one story, 50 x 132 ft.

Newark. Eclipse Knitting Mills; complete new mill of brick and terra cotta, three stories, 80 x 90 ft., as planned last year.

Newark. Radiant Silk Underwear Mills; install machinery for complete line of rayon undergarments; also additional finishing machinery.

Newark. Smartsilk Hosiery Mills, Inc.; take over plant of Westminster Knitting Co., Inc. and expand.

Paterson. Atlantic Silk Hosiery Co., Inc.; add 6 full-fashioned machines.

Paterson. Variety Knitting Corp.; change name from Clifton Hosiery Co.; move to 96 Thomas St. and install additional machinery.

Washington. Pohatcong Hosiery Mills, Inc.; build extension; three story and basement, 50 x 160 ft.; brick and reinforced concrete.

Wharton. Onyx Hosiery, Inc.; build two one-story additions, 40 x 64 ft., and 25 x 32 ft.; equip as power house and dye-house, respectively.

New York, Amsterdam. Foster & Gifford Silk Mills (Gloversville, N. Y.); purchase equipment of Adriutha Silk Fabric Co. and lease quarters formerly occupied by them.

Amsterdam. Yund, Kennedy & Yund; build brick warehouse; one story, 80 x 120 ft.

Averill Park. Faith Knitting Co.; build two-story brick and steel addition, 66 x 134 ft., at cost of about $42,000.

Ballston Spa. Spa Knitting Co., Inc.; erect addition for manufacturing purposes; two-story and basement; cost about $25,000.

Brooklyn. Tryus Knitting Mills, Inc.; incorporated for $40,000 to continue operation of Tryus Knitting Mills; move to larger quarters at 474 Johnson Ave, and increase equipment.

Cohoes. Roff Knitting Mills, Inc.; purchase Parsons Mill, last operated by Moore & Tierney, Inc.; make alterations and install machinery for shaker sweater coats.

Gloversville. Foster & Gifford Silk Mills, Inc.; acquire plant and business of Dorothy Silk Mills on Kingsboro Ave., and operate in conjunction with main plant; install 2 new knitting machines.

Johnstown. Johnstown Silk Mills, Inc.; purchase equipment of B. G. B. Silk Fabric Co., Amsterdam, N. Y. and transfer to Johnstown.

New York. American Rayon Products Corp.; formed by combination of interests of Vary Knit Co., Inc., Union Hill, N. J., Artsilk Knitting Mills, Inc., West New York, N. J., Banner Silk Knitting Mills, Brooklyn and New York, Crystal Mills, Inc., Brooklyn and the Knitted Textiles Corp., Allentown, Pa.

New York. Gotham Silk Hosiery Co.; build three-story addition to plant at 576-80 First Ave.

New York. Korn Bros.; move from 149 Spring St. to 105 Madison Ave., where capacity is greatly increased.

New York. Mengart Knitting Mills, Inc.; formed by merger of Mengart Knitting Mills, Fashion Lady Knitting Mills and Shafter's Knitting Mills.

New York. Rusaben Knitting Mills; capitalized at $10,000; succeed to business of Morton Knitting Mills; install additional machinery.

Rensselaer. Ashe Mfg. Corp.; complete three-story brick addition started last year.

Seneca Falls. Seneca Knitting Mills, Inc.; build new mill, two stories, 32 x 96 ft., concrete block construction; install 1 set wool cards and 360 woolen spindles.

Watertown. Shaughnessy Knitting Co.; construct new power plant; one story, 40 x 48 ft.; reinforced concrete.

North Carolina, Albemarle. Wiscassett Mills Co. (Knitting Dept.); add 10 full-fashioned machines.

Burlington. McEwen Knitting Mills Co.; build own mill as planned last year; two stories high, 60 x 120 ft., mill construction.

Charlotte. Charlotte Knitting Co.; take over and remodel additional floor of building, install full fashioned machinery.

Charlotte. Nebel Knitting Co.; build brick mill, 46 x 120 ft. and move to new quarters; add machinery.

Drexel. Drexel Knitting Mills Co.; construct brick building, two stories high, at cost of $25,000, to replace wooden structure.

Durham. Chatham Knitting Mills Co.; install finishing equipment.

Durham. Ruth Hosiery Mill; add 7 knitting machines, making total of 54.

East Durham. Knit-Well Hosiery Mills; install 20 additional knitting machines.

East Durham. Louise Knitting Mills Co.; build 50 x 140 ft. extension to local plant and equip with machinery formerly at Jonesboro.

Champion Knitting Mills, Chattanooga, Tenn., Showing Enlargements (Drawing by R. J. Shutting, Chattanooga, Tenn.)

East Flat Rock. Chipman-Burrows Hosiery Mills Co.; succeed to business of Skyland Hosiery Co.; install 100 new knitting machines and 2 dye machines.

Haw River. Riverside Hosiery Mills, Inc.; install 20 additional new knitting machines and 8 loopers.

Hendersonville. Grey Hosiery Mills; erect 50 x 130 ft. dyehouse and finishing plant.

Kinston. Kinston Knitting Co.; chartered with authorized capital of $400,000; take over Orion Knitting Mills.

Newton. Ridgeview Hosiery Mill Co.; construct extension to provide more space for equipment; also build monitor entire length of roof to improve lighting.

North Wilkesboro. Wilkes Hosiery Mills Co.; add 60 new machines for making half hose.

Salisbury. Wallace Wilson Hosiery Co.; erect own plant; 250 x 100 ft., one story, capable of supporting two additional stories when needed.

Statesville. Crescent Knitting Co.; incorporated for $100,000; take over and operate Queen Knitting Mill.

Valdese. Martinat Hosiery Mills; build addition and add to equipment.

Winston-Salem. Hanes Hosiery Mills Co.; construct plant; two stories, 500 x 125 ft.; when completed will move to new quarters and increase equipment.

Winston-Salem. Hanes Knitting Co.; erect storage warehouse; three compartments, each 75 x 200 ft., steel and concrete; cost about $80,000.

Ohio, Sidney. Miami Valley Knitting Mills; construct new two-story building and install additional knitting and dyeing machinery.

Oregon, Portland. Jantzen Knitting Mills, build one-story extension, 100 x 109 ft., to greatly increase capacity.

Pennsylvania, Philadelphia. H. C. Aberle Co.; erect new mill; five story, 95 x 125 ft., costing $200,000; also $15,000 storage shed.

Philadelphia. Adora Hosiery Mill (Frankford); add 10 latch needle knitting machines; also 60 pigeon machines.

Philadelphia. Apex Hosiery Co.; construct reinforced concrete addition; 95 x 155 ft., six stories and basement with wing 31 x 60 ft.; will approximately double machinery.

Philadelphia. B. M. C. Knitting Mills, Inc.; incorporated for $35,000 to continue business of Bernard M. Cohn at 1544 Frankford Ave.; install 10 new knitting machines and 3 loopers for making men's silk and rayon hosiery.

Philadelphia. Berkley Knitting Co.; purchase plant, equipment, good will and business of Royal-Ascot Knitting Mills Co. in Germantown.

Philadelphia. Bower & Kaufman; add 9 new full-fashioned machines.

Philadelphia. Co-Ed Knitting Mills; start erection of new building adjoining present plant; cost about $50,000; order 20 full fashioned machines.

Philadelphia. Marshall Field Mills Corp.; install 25 additional seamless machines in Burlington Hosiery Mills.

Philadelphia. Franklin Hosiery Co.; add 50 circular machines and 20 full-fashioned machines.

Philadelphia. Gotham Silk Hosiery Co.; purchase mill of Oscar Nebel Co., Inc., and continue operation of same as separate unit; install large number of knitting machines.

Philadelphia. Haines Hosiery Mills, Inc.; build one-story mill addition at cost of about $12,000; install 8 additional full fashioned machines.

Philadelphia. Herbert Hosiery Mills; move to larger quarters at D and Ontario Sts.; add 120 knitting machines, 25 ribbers, 10 loopers, 2 sewing machines.

Philadelphia. Howard Hosiery Co.; move to new quarters at Ontario and D Sts. and install 11 additional full-fashioned machines.

Philadelphia. Hy Quality Hosiery Mills; purchase plant and equipment of Ford Silk Hosiery Dyeing Co., move there and add full-fashioned and seamless machines for total production of 250 doz. ladies' full-fashioned and 200 doz. infants' hosiery daily.

Philadelphia. James R. Kendrick Co. (Germantown); build four-story mill addition, 45 x 70 ft.; increase production 70%.

Philadelphia. Largman, Gray Co. (Frankford); install additional new machinery consisting of 68 full-fashioned knitting machines, 6 loopers, 6 seamers.

Philadelphia. Lincoln Hosiery Corp.; purchase 8 additional full-fashioned machines.

Philadelphia. Mock, Judson, Voehringer, Inc.; incorporated for $200,000; take over plant and equipment of the Henry Lehmuth Co. and add new machinery.

Philadelphia. Neuco Knitting Mills; move to larger quarters at 1217 Spring Garden St. and install additional machinery.

Philadelphia. Northwood Hosiery Mills; incorporated for $200,000; purchase plant formerly operated by Endurance Knitting Co.; operate 28 full-fashioned machines.

Philadelphia. Oliver Knitting Co.; construct new mill at B St. and Wyoming Ave.; concrete, three stories high, containing 40,000 sq. ft.; transfer machinery to new structure and add 30 new full-fashioned machines.

Philadelphia. Portner Knitting Mills; move to 22d and Arch Sts. and install additional machines.

Philadelphia. Robinson Hosiery Mills; purchase machinery of Rokay Hosiery Mills, consisting of about 48 knitting machines and auxiliary equipment, and move it to Robinson mills.

Philadelphia. Rodgers Hosiery Co., Inc. (Germantown); build one-story addition, comprising a second story extension to mill, 77 x 150 ft.

Philadelphia. Schletter & Zander, Inc.; construct new plant at Levick St. and Kensington Ave.; main building, three stories, 92 x 175 ft.; power house, one story, 30 x 30 ft.

Philadelphia. Shaughnessy Knitting Co. (Watertown, N. Y.); lease building at 2046 E. Erie Ave., formerly occupied by Hy Quality Hosiery Mills; purchase part of machinery of Hy Quality mills and start manufacturing full-fashioned hosiery there.

Philadelphia. Spuntex Knitting Mills; construct L-shaped addition, two stories and basement, giving 30,000 sq. ft. more floor space; will add 24 full-fashioned machines and 75 to 100 new spring needle knitting machines.

Philadelphia. Tex-O Hosiery Mills (formerly Klock, Halbert & Dyson, Inc.); move to larger quarters at Hart Lane and Emerald St.; install 13 additional knitting machines and 1 looper.

Philadelphia. Triangle Neckwear Co.; move to N. E. cor 9th and Spruce Sts. and install 10 additional circular machines.

Philadelphia. Triple Wear Hosiery Mills; purchase Lorraine Hosiery Mills, install few additional machines.

Philadelphia. Triumph Hosiery Mills, Inc.; establish branch plant at Ontario and I Sts. for full fashioned hosiery; 28 full-fashioned knitting machines.

Philadelphia. Unique Knitting Co.; lease building at Emerald and Westmoreland Sts. having triple floor space formerly occupied; install additional machinery.

Philadelphia. Unity Hosiery Co.; build addition and add 6 full-fashioned knitting machines and 2 loopers.

Bangor. Korn Bros. (New York); purchase plant of Slate Valley Fabric Co., Inc. and continue manufacture of silk jersey, tricot and milanese cloth there; plan to install finishing equipment.

Hazelton. Baker Underwear Co.; construct mill addition, one-story, 45 x 69 ft.

Lansdale. Dexdale Hosiery Mills (formerly Norristown Hosiery Mills); build three-story, 92 x 105 ft. addition to Lansdale plant and move machinery from Norristown to new structure; also construct three-story, 92 x 135 ft. extension.

Lebanon. Industrial Hosiery Mills; erect new building to house loopers and dyeing equipment.

Macungie. Macungie Knitting Mills, Inc.; enlarge plant by erecting one-story addition, 100 x 100 ft.

Quakertown. Best Made Silk Hosiery Co.; erect two-story, 50 x 100 ft. fireproof building in Quakertown; remove machinery from Shelly mill; add new 42-gauge full fashioned machines.

Reading. D. S. & W. Hosiery Co.; purchase mill of Wm. F. Taubel, Inc. at Moss St.; buy 20 new full-fashioned machines.

Reading. E. Richard Meinig Co.; build one-story brick addition, 175 x 214 ft. at cost of $60,000; also four-story, 46½ x 81 ft. extension, costing $20,000.

Reading. Oakbrook Hosiery Mills, Inc.; purchase plant of Stanley Shoe Co. and install 24 new 42-gauge full-fashioned machines; build addition to this plant.

Rosedale. Rosedale Knitting Co.; construct two-story addition, 100 x 250 ft., to house about 100 knitting machines.

Rhode Island, Central Falls. Blackstone Knitting Co.; succeed to business of Hardwear Hosiery Mill and double equipment.

Providence. Roseknit Hosiery Co.; move to 151 Summer St.; add 2 ribbers and 6 knitters.

Woonsocket. Narragansett Knitting Mills, Inc.; acquire title to property of Leicester Knitting Mills Co., 148 Bernon St.; start operations, specializing on bathing suits and sports wear.

Woonsocket. Rhode Island Knitting Co.; construct new mill on Ave. C; two stories 32 x 60 ft.; cost $25,000; add 3 circular knitting machines, 3 ribbers, 2 sewing machines.

South Carolina, Anderson. Anderson Hosiery Mills; purchase equipment of Calton Mfg. Co., Spartanburg, and move it to Anderson.

Spartanburg. Star Hosiery Mills; install 60 additional latch needle knitting machines and 20 loopers.

Tennessee, Athens. Athens Hosiery Mills; build two-story brick extension to house finishing department and offices.

Chattanooga. Champion Knitting Mills; erect two-story and basement mill addition having 15,000 sq. ft. of floor space.

Chattanooga. Davenport Hosiery Mills; build full-fashioned hosiery unit, 95 x 230 ft., two-story, with provision made for additional two stories later; approximately $500,000 worth of full fashioned machinery.

Chattanooga. Miller-Smith Hosiery Mills; acquire plant of Moore-Merritt Rubber Co., move equipment there and add full-fashioned machinery.

Chattanooga. Mountain City Knitting Mills; construct two-story addition, 60 x 90 ft., for office quarters and shipping room, at cost of about $30,000; add about $20,000 worth of new machinery.

Chattanooga. Nick-A-Jack Hosiery Mills; build two one-story extensions, 26 x 33 ft. and 21 x 15 ft.

Clinton. Magnet Knitting Mills; construct full-fashioned unit; two stories, 96 x 220 ft.; initial equipment 16 f. f. machines.

Knoxville. Ashe Hosiery Mills; erect 50 x 65 ft. mill addition and 72 x 40 ft. dyehouse of brick, at cost of $20,000; new knitters, ribbers and loopers, costing $30,000.

Knoxville. Standard Knitting Mills; extend Mill No. 2 40 ft. to relieve crowded condition in folding and shipping departments; two stories and basement; also install 300 H. P. boiler.

Lenoir City. Charles H. Bacon Co.; install 5 sets of cards.

McMinnville. Read Hosiery Mill; build two-story and basement wing to connect Mills Nos. 1 and 2; install finishing and shipping departments there.

Nashville. Washington Hosiery Mills; erect dyehouse and finishing plant, 87 x 87 ft., at cost of about $20,000.

Telford. Partain Hosiery Mills; take over Telford Knitting Mills and install additional machinery.

Virginia, Bristol. Tenneva Hosiery Mills; install 100 additional knitting machines.

Danville. Danville Knitting Mills; lease building at Loyal and Craghead Sts. and establish branch there; 275 circular knitting machines.

Norfolk. Chesapeake Knitting Mills; construct extension at cost of $10,000; one story, 70 x 68 ft.

Petersburg. Lubinette Knitting Mills (New York); establish branch plant in leased quarters here; approximately 100 knitting machines and auxiliary equipment.

West Virginia, Martinsburg. Interwoven Mills, Inc.; build four-story, reinforced concrete addition, 120 x 150 ft., for storage service; cost $250,000.

Morgantown. Tryon Silk Fabrics, Inc.; construct new two-story, 100 x 40 ft. plant and equip with machinery from Gloversville, N. Y. mill.

Princeton. Princeton Hosiery Mills Co.; add 20 new knitting machines.

Wisconsin, Green Bay. Green Bay Knitting Mills; incorporated for $50,000; purchase Green Bay Knitting Works and add to equipment.

Milwaukee. Elbro Knitting Mills; move to larger plant at 712-14 Sycamore St.; plan to increase production 33% at start; install new automatic equipment.

Milwaukee. Everwear Hosiery Co.; install 14 full-fashioned knitting machines, 26 circular knitting machines, 3 monel metal

dyeing machines and new boarding equipment.

Milwaukee. Warren Knitting Mills; build new two-story plant of brick and concrete on lot 150 x 50 ft.; add 40 cap machines.

Canada, Hamilton, Ont. Eaton Knitting Co., Ltd.; lease building at Mary and Cannon Sts.; equip with 40 knitting machines, 16 ribbers and 100 sewing machines, for branch plant.

Tavistock, Ont. J. G. Field & Son; rebuild part of plant destroyed by fire; also construct fireproof addition to house pickers.

Toronto, Ont. Belding-Corticelli, Ltd.; acquire assets and machinery of Hosiery Corporation of Canada and transfer equipment to Montreal plant of Belding-Corticelli.

Toronto, Ont. Toronto Hosiery Co., Ltd.; purchase plant of Dominion Glass Co., Ltd., on Sudbury St. and remove machinery from Queen St. plant to Sudbury St. building; old plant to be used for dyeing and finishing.

Woodstock, Ont. Harvey Knitting Co., Ltd.; install additional spring needle knitting machines, winders and dyehouse machinery, costing approximately $40,000.

Sherbrooke, Que. Julius Kayser & Co., Ltd.; build four-story concrete addition and equip with about 60 full-fashioned hosiery machines.

SILK MILLS

Connecticut, Danbury. Tweedy Silk Mills; build new dyehouse, 40 x 85 ft.; also finishing building, 30 x 150 ft.; both structures cost about $17,000.

Middletown. Portland Silk Co., Inc.; complete three-story mill addition started last year and install additional looms, increasing total to 500.

Mystic. Sadonia Mills Co.; succeed to business of Robinson Silk Co.; build one-story saw-tooth silk weaving and preparatory mill; install 128 new looms.

Putnam. Edward Bloom Co. (New London, Conn.); purchase plant of Putnam Mfg. Co.; remodel and equip as branch mill; 250 looms.

Willimantic. Rossie Velvet Co.; start erection of new building to house equipment now operating in three separate buildings of company in Willimantic.

Illinois, Chicago. Oscar Heineman Corp.; build four-story addition, 126 x 129 ft., at cost of approximately $300,000.

Massachusetts, Becket. Smith Silk Co.; organize to start operation of mill formerly run by the late S. K. Smith.

Boston. Carl Stohn, Inc.; build one-story extension to house master mechanic's department.

New Bedford. Gilt Edge Silk Mills; construct two-story, 56 x 150 ft. extension and equip with 100 looms.

Newton Upper Falls. Newton Mills (New England Spun Silk Corp.); one-story brick mill addition, 60 x 85 ft., erected at cost of about $10,000.

Taunton. Taunton Weaving Co.; install 48 new box looms for 54-in. goods.

New Jersey, Bayonne. Roslyn Silk Mills, Inc.; construct new one-story mill, 100 x 183 ft., of brick and steel.

Jersey City. C. Stohn's Sons; build two-story mill addition, 50 x 130 ft.; also make alterations and improvements at cost of about $8,500.

North Bergen. Martha Silk Mills; extend plant and install 50 broad looms, also winders and warpers.

Paterson. American Ribbon Mills, Inc.; formed to take over and start operation of Helvetia Silk Mill.

Paterson. Gallia Silk Mills (Bethlehem, Pa.); lease entire Lemnos Broad Silk Works at 23 Camden St. and resume operations there.

Paterson. Gilt Edge Silk Mills of N. J.; take over Saxon Silk Mills, equipped with 4,200 spindles and 100 wide looms; transfer looms to Gilt Edge Silk Mills at New Bedford.

Paterson. Warner Woven Label Co., Inc.; construct reinforced concrete and brick mill addition; two-story, 80 x 140 ft.; cost $80,000.

Paterson. William-Irving Silk Co.; capitalized at $125,000; purchase plant of Courtland Silk Co. and start operations.

Plainfield. Herman Kahn & Co. (New York); acquire former Berfelden Mills and remodel for branch plant to manufacture silks; install additional looms and other equipment.

New York, Castile. DeWitt, Boag Co. (Hornell, N. Y.); establish branch mill in building formerly occupied by Perry Knitting Co.

Depew. Albert Godde Bedin, Inc.; build mill addition at cost of about $125,000, with equipment; plan to double capacity.

Glens Falls. Champlain Silk Mills; lease additional space and install machinery purchased from Salt's Griswold Mills, of Darby, Pa.; increased capacity devoted to manufacture of Tussah yarns.

Nanuet. A. Schottland, Inc.; erect mill addition; one-story high, 65 x 180 ft.

New York. Belding-Heminway Co.; formed by merger of Belding Bros. & Co. and Heminway Silk Co.; Heminway Silk Co. purchase full-fashioned hosiery plant of Fedden Bros. Co., Inc., at 4283 Park Ave.

Ogdensburg. Manhattan Silk Co.; build one-story brick annex, 20 x 80 ft., to plant on lower Ford St., to house warping department, formerly in another building.

Rochester. Schlegel Mfg. Co.; build three-story reinforced concrete addition, 50 x 60 ft.

Sidney. Butterfly Silk Co.; move from Paterson, N. J., and install additional new looms.

Whitehall. Champlain Silk Mills; build mill construction addition, 170 x 100 ft., to make room for some equipment moved from their Glens Falls, N. Y., plant, and some machinery purchased from Salt's Griswold Mills, Darby, Pa.

Pennsylvania, Allentown. Majestic Silk Mills, Inc.; complete 66 x 217 ft. extension started last year and install 62 additional box looms.

Allentown. Maxwell Silk Mill, Inc.; build 86 x 93 ft. addition, one-story high; install 88 54-in. broad looms and auxiliary machinery.

Allentown. S. M. S. Silk Co.; construct mill addition; two stories, 70 x 120 ft.

Allentown. Winona Silk Co.; add 12 new looms to equipment.

Bally. Bally Ribbon Mills, Inc.; install 20 additional looms.

Berwick. Washington Silk Co.; add 18 looms to equipment.

Bethlehem. R. K. Laros Silk Co.; erect addition at cost of $150,000; three stories, 220 x 60 ft.

Bethlehem. Twentieth Century Silk Corp.; build additions; two stories, each 50 x 100 ft.; add 24 coner machines, 12 spinners and 27 winders.

Columbia. Reliable Silk Mfg. Co.; move equipment of Paterson plant to new fireproof building at Columbia.

Columbia. Schwarzenbach-Huber Co.; erect three-story and basement addition, 58 x 209 ft.

Connellsville. Connellsville Silk Co.; build extension to silk vault, spinning mill and new warping building.

Dunmore. Henry Mindlin & Sons, Inc.; take over plant of Pennsylvania Silk Throwing Co., formerly operated by Mindlin & Rosenman, at Dunmore; install additional machinery.

Emaus. J. H. Frederick Silk Mills; build 60 x 60 ft. extension to mill.

Emaus. Tremont Silk Mills, Inc. (Widder Bros.); construct one-story, 100 x 220 ft. mill addition and one-story boiler plant, 47 x 70 ft.; add 50 new looms.

Forty Fort. Fashion Silk Co., Inc.; purchase machinery and equipment of Valley Silk Co., Plymouth, Pa., consisting of 128 looms, etc.; lease building.

Gettysburg. C. K. Eagle & Co., Inc.; install 4 spinners, 20 twisters and 14 winders.

Hughesville. Shindel Silk Corp.; construct addition to house 96 looms.

Kingston. Kingston Silk Throwing Co.; take over plant of Amalgamted Silk Corp. and move equipment to new quarters; add 15,000 spindles.

Lancaster.. Stehlisilks Corp.; build mill addition, three stories high, 44 x 175 ft.

Lansford. Lehigh Valley Silk Mills (Bethlehem, Pa.); purchase plant of Century Throwing Co. and add 2,000 spindles.

Lebanon. Lebanon Silk Co.; erect new mill at 7th and Locust Sts.

Lehighton. Lecha Silk Co. (Allentown, Pa.); lease part of mill of Baer Co. and install 40 ribbon looms.

Manheim. Stehlisilks Corp. (Lancaster, Pa.); acquire plant of Queen City Silk Co. and install 156 looms.

Mount Carmel. Shindel Silk Corp.; build 30 x 50 ft., two-story addition for shipping, inspection and picking as well as giving space for 50 new looms.

Plymouth. Hess, Goldsmith & Co., Inc. (Wilkes-Barre, Pa.); buy plant of Atwood Silk Co., having 25,000 spindles.

Pottstown. Thomas Graham Co.; install new machinery at cost of $25,000.

Pottstown. Norman Lederer Silk Corp.; lease four-story building and install additional looms.

Pottstown. Seltmann & Knight, Inc.; acquire additional building and equip for weaving.

Ridgeway. Holmes Silk Co.; build one-story and basement addition, 74 x 100 ft., estimated to cost $75,000 with equipment.

Scranton. West Park Throwing Co. (subsidiary of Albert J. Pfeiffer & Co., New York); incorporated for $100,000; purchase Scranton plant of Mindlin & Rosenman, add 20 spinners.

Shamokin. C. K. Eagle & Co., Inc.; start construction of new plant addition.

Shamokin. Heweso Silk Co.; erect four-story extension, 53 x 90 ft. and install 120 additional looms.

Souderton. A. J. M. Silk Co., Inc.; acquire Souderton mill and equipment of Amalgamated Silk Corp.; start production of artificial filled silk goods, equipped with 40 looms.

Sunbury. Urquart Mfg. Co.; build one-story addition, 46 x 105 ft., with extension, 18 x 20 ft.; install 50 additional looms.

Topton. Penn State Silk Mills; construct basement under plant and install 50 new looms.

Weisport. Brawer Bros. Silk Co.; erect new power plant at cost of about $30,000.

West Pittston. Gillis-Krych Silk Co., (Kingston, Pa.); purchase plant of Valley Silk Co. and resume operations there.

White Haven. White Haven Silk Co.; build addition; lower floor to house oil burning engine.

Wilkes-Barre. B. Edmund David, Inc.; build additional story to former two-story mill and equip with warping and winding machinery.

Williamsport. West Branch Silk Co., Inc.; build one-story, 120 x 40 ft. extension to plant and add 30 looms.

Wind Gap. Marian Silk Mills, Inc.; capitalized at $50,000; acquire local plant of Amalgamted Silk Corp.; start manufacturing silk and rayon mixed fabrics; 80 looms.

Rhode Island, Pawtucket. Darlington Textile Co.; complete three-story, 85 x 170 ft. addition started last year; install additional machinery.

Pawtucket. Harcourt Silk Mill, Inc.; build addition costing about $5,000.

Virginia, Harrisonburg. Stehlisilks Corp.; build extension to Harrisonburg mill.

RAYON MILLS

New Jersey, Clifton. Napon Rayon Corp.; purchase plant of Cupra, Inc.; install equipment in present buildings for 1,500 lbs. per day capacity; plan to erect other buildings and increase capacity to 6,000 lbs. per day, later.

New York, Buffalo. du Pont Rayon Co.; start construction of new 8,000,000 lb. unit; all one-story, saw-tooth buildings except chemical building which will be five stories high.

New York. Industrial Rayon Corp.; incorporated with authorized capital of 600,000 shares of no par value stock, to acquire stock of Industrial Fibre Corp. of America; also acquire stock of Fibre Throwing & Dyeing Co., Inc., Paterson, N. J.

Ohio, Cleveland. Industrial Rayon Corp.; extend plant and increase output to 12,000 lbs. per day.

Pennsylvania, Philadelphia. E. E. Steidler & Co.; change name of plant from Rayona Mills to Vistex Mills, Inc.; take over additional quarters at 2601 N Howard St. and install 5,000 spindles, making total of 7,500 operated.

Lewistown. Viscose Co.; build one-story, 90 x 160 ft. machine and wood working shop; cost $50,000, with machinery.

Marcus Hook. Viscose Co.; erect new one-story brick processing plant, at cost of about $400,000; brick and steel office and administration building, two stories high, 50 x 125 ft. one-story addition to boiler plant; one-story, 97 x 120 ft. extension, primarily for storage service, and two-story fire house.

Sellersville. Lyons Artificial Silk Co., Inc.; install additional machinery in Sellersville plant and purchase 35 acres of land near Pennsville, N. J., for branch plant.

Tennessee, Old Hickory (near Nashville) duPont Rayon Co. (formerly duPont Fibersilk Co.); build second unit of plant, bringing total for this plant to about 10,000,000 lbs. per year.

Virginia, Roanoke. Viscose Co.; construct new unit at cost of approximately $1,000,000 for building alone.

MISCELLANEOUS MILLS

Connecticut, Bridgeport. Raybestos Co.; erect two-story addition, 96 x 157 ft., for warehouse and shipping department.

Middletown. Frissell Fabric Co.; two-story brick mill addition, 42 x 90 ft.

Stamford. H. E. Verran Co.; build extension, 170 x 77 ft., four stories high, for manufacturing purposes, and a wing, 194 x 51 ft., four stories, for storage purposes; also enlarge dyehouse.

Georgia, Chickamauga. Crystal Springs Bleachery Co.; install mercerizing plant having daily capacity of 40,000 yds.

La Grange. Valley Mills; erect two-story brick extension for rug and carpet weaving; 80 x 250 ft.

Illinois, Chicago. Wallace Bros. Waste Co.; build new plant; two stories high, 50 x 123 ft., at cost of about $50,000.

Maine, Lewiston. Lewiston Bleachery & Dye Works; construct two-story addition to main building.

Westbrook. Dana Warp Mills; erect addition to dye house at cost of $20,000; two-story, 70 x 70 ft.

Massachusetts, Brockton. Herbert, Stretch & Kendrick; start manufacture of elastic goring, webbing, etc., in plant formerly occupied by Walker Webbing Co.

Mansfield. Mansfield Bleachery; build new dyehouse for rayon filled fabrics and vat colored piece goods; also extend bleach house; add 300 H. P.; increase production 40%.

North Dighton. Mount Hope Finishing Co.; extend plant 200 x 100 ft., one story and basement.

Watertown. Brunsene Co.; build brick addition, two stories high, 150 x 22 ft.

Webster. S. Slater & Sons, Inc.; erect two new brick buildings; an aniline building, one story, 102 x 79 ft., with an ell 33 x 33 ft., and a color building two stories and basement, 103 x 57 ft.

Wilkinsonville. Anco Finishing Corp.; acquire property of Anco Branch of Springdale Finishing Co., Inc., install new machinery and rearrange old.

Worcester. H. Glick; erect one-story top addition at cost of about $12,000.

New Jersey. Camden. United Dyeing & Bleaching Co.; organized to succeed R. H. Comey Camden Co. which has gone out of business.

Gloucester. Forrest Mercerizing Co.; erect two-story addition to end of present building, to be used for converting rayon from skein to cones and cops.

Hawthorne. Textile Dyeing Co. of America, Inc.; construct one-story addition, 80 x 120 ft., for weighting and dyeing departments.

Lodi. United Piece Dye Works; erect two-story, 96 x 193 ft. concrete addition at cost of $200,000.

North Bergen. Universal Mercerizing Co., Inc. (formerly Universal Mercerizing & Dyeing Co., Inc., West Hoboken); build new plant having 10,000 sq. ft. floor space.

Paterson. Consolidated Piece Dye Works; erect one-story addition for drying service.

Paterson. Cramer & King Co.; build new power house; one story, 40 x 60 ft.; cost about $35,000 with equipment.

Paterson. Lyons Piece Dye Works; build brick addition, two stories, 44 x 84 ft. at cost of $30,000, primarily for office service; also three-story addition, 84 x 85 ft., brick and steel, for printing department.

Paterson. Masson Dyeing Co., Inc.; move from Jersey City to Fairlawn, N. J., where have four times as much space as at old quarters.

Paterson. Royal Piece Dye Works, Inc.; erect two-story, 100 x 250 ft. dyehouse, at cost of about $90,000, with equipment.

Paterson. Victory Dyeing & Finishing Co.; build 75 x 173 ft. addition, one story high, and approximately double capacity.

Paterson. Washington Piece Dyeing & Finishing Co.; purchase plant of Gautschy Silk Dyeing Co. at First Ave.; construct two-story, brick and steel dyehouse addition and new boiler room, at cost of about $100,000.

Paterson. Weidmann Division, United Piece Dye Works; build one-story and basement dyehouse at cost of about $75,000, including equipment.

New York, Cohoes. Little Falls Fibre Co.; purchase mill and equipment of Hilton Underwear Co., Cohoes; also plant and some machinery of Waterford Knitting Co., Waterford; install additional equipment.

Long Island City. United Textile Print Works, Inc. (New York); lease new one and two-story reinforced concrete mill on Fourth Ave., near Webster Ave.; install new equipment.

Minetto. Columbia Mills, Inc.; build brick and mill type addition.

North Carolina, Greensboro. Proximity Print Works; erect addition to approximately double capacity.

Mt. Holly. American Yarn & Processing Co.; enlarge processing plant and install new equipment to double production of mercerized cotton yarns; new machinery includes yarn mercerizing range, winders, etc.

Tryon. Southern Mercerizing Co.; build addition, 125 x 35 ft.; add new equipment comprising additional drying machinery, about 4 cone winders and 8 skein spoolers.

Winston-Salem. Hanes Dye & Finishing Co. complete plant started last year; one-story brick building, 282 x 122 ft.

Pennsylvania. Philadelphia. B. S. T. Co. (Frankford); build one-story dye house addition.

Philadelphia. T. Brophy's Sons; acquire modern plant, equipped with latest model machinery located at Richmond St., below Tioga St.

Philadelphia. Chrstos Hosiery Dye Works; build addition to plant at cost of $4,500.

Philadelphia. Delta Finishing Co.; acquire part of machinery of Philadelphia Dyeing & Finishing Co. and move to Lewis & Ashland Sts., Frankford; also install some machinery formerly owned by Maryland Finishing Works of Aberdeen, Md., and some new machinery in Frankfort plant.

Philadelphia. Fidelity Finishing Works, Inc.; install new equipment to facilitate production and shipments.

Philadelphia. Franklin Process Co.; erect three-story and basement dye house addition, 86 x 110 ft., costing $80,000.

Philadelphia. Majestic Silk Hosiery Dyeing Co., Inc.; build addition to plant at cost of $5,500.

Philadelphia. Summerdale Dyeing & Finishing Works, Inc.; machinery of Philadelphia Dyeing & Finishing Co., which is out of business, divided between Summerdale Dyeing & Finishing Works at Holmesburg, and Delta Finishing Co. at Frankford; also acquire some machinery of Maryland Finishing Works of Aberdeen, Md.

Chester. Aberfoyle Mfg. Co.; construct new dyehouse, three stories, 140 x 240 ft.

Eddystone. Joseph Bancroft & Sons Co. (Wilmington, Del.); purchase controlling interest in Eddystone Mfg. Co.

Reading. Bick Dyeing Co., Inc.; build addition to boiler house and install new 150 H. P. boiler; also additional equipment for dyeing silk knit goods.

Rhode Island. Apponaug. Apponaug Co.; install printing machinery and auxiliary equipment to handle 54-in. goods; build one-story extension, 33 x 63 ft., for caustic department.

Bradford. Bradford Dyeing Association (U. S. A.); complete one-story extension for dyeing and finishing of rayon and cotton mixtures.

Cranston. Narragansett Braid Co.; complete new one-story, 50 x 135 ft. plant in Cranston and remove equipment from Providence to new structure.

Pawtucket. Acme Finishing Co.; build one-story, 24 x 36 ft. extension to dyeing and finishing building.

Pawtucket. Robert D. Mason Co.; make extensive alterations and improvements; practically double capacity of warp yarn departments and increase output of rayon and cotton skein yarn departments; replace steam with electric power.

Providence. Imperial Printing & Finishing Co.; erect one and two-story bleachery, 100 x 140 ft.

Providence. U. S. Finishing Co.; construct one-story extension to dyeing department of Silver Spring Branch.

West Warwick. Quaker Braid Co. of Rhode Island; (successor to Quaker Braid Co., Phenix, R. I.); incorporated for $25,000; lease plant in West Warwick and equip with 350 braiders.

Woonsocket. Fairmount Dye Works, Inc.; build 90 x 100 ft. extension.

Woonsocket. Florence Dye Works; erect one and two-story addition, 25 x 200 ft.

Woonsocket. Quality Piece Dye Works; purchase Gold Mark Dyeing & Finishing Works at Canal & Water Sts.; build two-story brick addition, 40 x 85 ft.; also one and two-story, 40 x 73 ft. carbonizing building.

South Carolina. Greenville. Southern Franklin Process Co.; construct two-story and basement, 140 x 60 ft. plant addition and equip with 24 winders; 1 4-section dryer and 4 dyeing machines.

1925 Investment Interest in Shares Small

Record of Most Staple Cotton Goods Mills North and South as Bad Last Year as in 1924, but Outlook Evidences Encouraging Signs With Opening of 1926—Hope for Greater Interest as General and Textile Business Improves

THE belief expressed a year ago that cotton mills which had stood the acid test of 1924 in a satisfactory manner would prove safe and profitable investments during 1925 proved to have been too optimistic. It is true that certain mills, particularly northern and southern mills making staple cotton goods, completed the acid testing process in 1924, but it seems to have left some of them in a weakened condition, and although they may have improved their financial position during 1925, few of them were able to make this visible to stockholders and investors in the form of dividend resumptions or increases. Numerous other cotton mills, and quite a number of wool and knit goods mills gave no evidence until well along in 1925 that they were being subjected to the acid testing process, but since then the number of unsatisfactory mill statements, reduced and passed dividends has been sufficient to sour the milk of human kindness in bankers and investors toward textile stocks in general.

Particularly discouraging to bankers who have endeavored to make a market for textile securities has been the continued recurrence of disappointing mill statements and reduced dividends at times when it looked as though business was on the mend. Early in the year and again during late summer and early fall there was quite a wave of investment buying of textiles, but in each instance there was a succeeding marked drop in stock values, with the result that selling of textiles in December for the purpose of taking losses in anticipation of Federal taxes was even larger than during the same month of 1924. As a result of these disappointing experiences the market for cotton mill securities is narrower today than at any time since 1921. A large volume of cotton mill shares is being carried along by stockholders simply because they cannot find a market, or are unwilling to take the large losses in stock values that a current sale would involve. Many of these holders will dispose of their stocks just as soon as a favorable opportunity offers. A broadened market for cotton mill shares will be slow in developing, and only insiders who can obtain positive knowledge of improving conditions can be expected to anticipate a prospective upward movement in stock values. The so-called outside investor is outside until such permanent improvement has been visibly demonstrated.

Always Darkest Before the Dawn

While the experiences of most investors in cotton mill stocks, and their present attitude toward the market, are faithfully pictured in the preceding paragraphs, there actually has been a very marked improvement in the financial and business status of very many cotton mills since the late fall of 1925, and the business outlook is considerably brighter than it was a year ago. The conditions that were responsible for disappointing results during 1925 have been met by the majority of manufacturers and no new factors of an unfavorable character are in sight; the serious shrinkage in inventory values that was one of the chief factors responsible for poor results during 1925 is not unlikely to be turned into an enhancement of inventory values during 1926; at least, a shrinkage in inventories due to a decline in cotton or wool is a most remote contingency. Values of cotton mill securities average from 5 to 25 points lower than they did a year ago, and in the case of the majority of mills it can safely be assumed to discount every unfavorable factor in sight. This is the case despite the fact that there has been a moderate net advance in values since last summer, and also despite the fact that recent demand has been the narrowest on record. It is such conditions as these that usually attract shrewd investors to commence accumulations of desirable securities, and it will be surprising if some buying of this character does not develop in the near future.

For many years there has been published in these columns a selected list of 17 textile stocks that is regarded as being fairly barometric of the course of textile share values in New England. Of these 14 are what were once classified as "gilt edged shares," and every one of these shows a net loss in share value for the year, the losses varying from 2 to 57 points. The average net loss scored by these 14 stocks is 19.8 points. All but 7 of these stocks, however, have made fairly substantial advances from the lows of the year, these advances ranging from 2 to 27 points; 7 of the stocks closed December at the lows for the year; the average net advance in these 14 stocks from the lows of the year was 6 points. The majority of these 14 mills made medium and coarse count cloths that are highly competitive with southern mills, yet the average net loss in stock values scored by these mills is not much greater than that of any similar representative list of southern mills.

Of 21 Fall River cotton mills whose stock values as of December 31, 1924 and 1925, are easily comparable, 19 showed a net decline ranging from 1 to 80 points and averaging 27.47 points, while only two mills in this list showed a net advance in stock values, one of 15 and the other of 16 points. The average net decline for the year in stock values of these mills was 23.33 points.

New Bedford, having a larger number of fine count mills than Fall River or other parts of New England that are non-competitive with southern mills, would naturally be expected to make a better showing than other cotton mills of New England. Of 25 mills in that city, whose stock values as of December 31 are easily comparable showed an average net decline in stock values for the year of 13.85 points; only five of these mills scored net advances for the year, these ranging from 2½ to 30 points and averaging 11.23 points. Twenty showed declines of from 2 to 95 points, or an average of 25 points.

In a representative list of 44 southern cotton mill stocks we find that two were unchanged, 29 showed a decline from 1 to 80 points and an average of 14 points, while 13 showed an advance of from 1 to 75 points or an average of 15 points; the net average decline in stock values of these 44 southern mills for the year 1925 was 4.88 points. It should be explained that the market for southern cotton mill stocks is normally much less active than that for New England shares and that there is usually a very much wider variation between bid and asked prices on southern than on New England textile stocks. The important factor to be noted in this comparison of changes in stock values during 1925 is the fact that southern mills as well as New England mills suffered and the degree of this suffering may not be disclosed with more than approximate accuracy by a comparison of stock values.

Few Changes in Dividends

There was no radical decrease in gross dividends paid by Fall River, New Bedford and other New England mills during 1925, or in those paid by southern mills, yet many of the mills that reduced or passed their dividends were of the "gilt edge" class and had such long and unbroken records of dividend payments, that this action of their directors exerted a much more depressive influence upon the securities market than could similar action by a larger number of weaker mills. The Hill and Hamilton Manufacturing Company fiascos exerted a much less permanently depressive influence upon the general market than did the reduction of dividends by such high grade mills as Everett, Massachusetts, Sagamore and Pacific, although there are few in close touch with these mills who do not expect that Massachusetts and Sagamore at least will be able to resume dividends at old rates as soon as there has been a moderate improvement in business. The decrease in dividend payments by these mills and most of those which cut dividends later was due more to

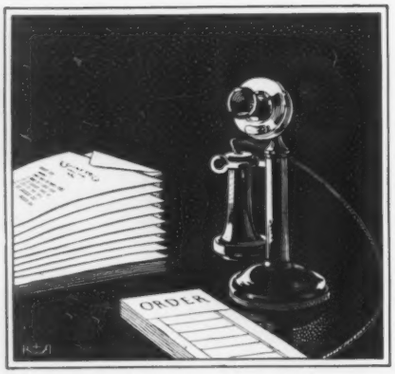
COMPARATIVE VALUES OF TYPICAL NEW ENGLAND TEXTILE SHARES, 1914 AND 1918 TO 1926 SHOWING HIGH AND LOW FOR EACH YEAR

	1925			1924		1923		1922		1921		1920		1919		1918		1914	
	Dec. 31	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	Low	July
American Woolen, pfd	88½	96	74	102½	92¼	118⅛	97	111⅝	102	104	91	105¼	92	109½	94⅛	99½	89	73⅝	74½
Amoskeag, com	70	84½	62	80	60¼	112	67½	117	106	104	†72	*167	75½	150	89	90	60½	58½	62
Androscoggin	125	132	125	145	132	116½	100⅛	141	119	125	†119	*225	193¼	193¼	180	190	178	135¼	137
Arlington	98⅞	104¼	90⅝	106¼	99⅞	175	142¼	114½	90½	109	90½	172¾	89	141¼	109	126½	106⅞	74¼	80
Bates	190⅝	233¼	190⅝	235½	210	263	235¼	273	190¼	211⅜	183	315⅛	195	273	255	275	251	213¼	213¼
Bigelow-Hartford, pfd	101	105	100	†114½	102½	†119¼	114¼	119¼	93¾	122⅛	93¾	111	93	100	83¼	89½	80½	....	....
Great Falls	19¼	24½	12	37	23½	77½	33½	120½	75¾	147½	119½	241	131	219	177	195½	177	168	170¾
Hamilton Mfg	4¾	54	4¾	54	41	85	46½	92½	63	120	†70	*187⅜	140¾	155	109	115	90	75	75
Lyman	116¾	142¼	116	166½	142¼	183¼	166½	186½	162½	180	162½	190½	175	170½	132	140	131⅛	112	120
Mass. Cotton	77	130¾	72¾	149	125	174½	149	158½	146	148¼	132⅞	167¾	132½	145	118	142	126	115½	116
Merrimack, com	100⅛	112	75¾	112	99⅜	107⅞	100½	104⅜	90¾	102	74	125½	100	117	66⅜	78	60¾	24½	24⅝
Nashua, com	60	73¼	60	85½	69	79	71¼	85	73	109½	†85	*260¼	105⅛	310	†230	*855½	798	630	672½
Naumkeag	186	203	180¾	195	164⅛	*315	255	260¼	210¼	208	189¼	241½	195	222¼	163	195½	154	172	172
Pacific	53	81¼	51	86½	71	100	†84	†190	159	170	147	175	†160	*190	150	155	129	106	110
Pepperell	134½	142	107	142½	108	167½	134	180	164⅜	202	178	220	200	210	188	206¼	190	290	305
Tremont & Suffolk	43⅛	108¾	43⅛	139½	75	155½	100	165½	135	190	125	281	190	280¼	157½	158	137½	100	100¾
York	55	112¾	55	125½	103⅜	230	120¼	220	195	225	195	226	133½	190	110	133½	110	85	85

* Old stock. † New stock

After five years of writing

a $40,000 order on the *first* long distance call



FOR 5 YEARS a New York concern wrote a southern construction company trying to get a first order for finished material in carload lots. Twice each year the sales manager mailed prices that he knew were right. No response. Finally, when the semi-annual request for quotations came in, he reached for his telephone and got the purchasing agent, a thousand miles away, on the wire. Prices and conditions were discussed and he took the order then and there. It amounted to $40,000!

IN THOUSANDS of businesses today the long distance telephone is getting results that otherwise would be lost. Long Distance cuts out waiting and gets the answer. It gets immediate consideration for important matters. It gets past closed doors, for its mission is obviously to serve. Many times Long Distance gets first orders where all other means have failed to get an audience.

Have you studied your own business to see how many telephone opportunities are being neglected? Is the telephone used only in an emergency, or are your department heads and the members of your sales staff trained to use Long Distance regularly to cut expense, to make sales or purchases that otherwise could not be made? Long Distance has a place on the program of every business that has or wants more than a local territory.

The Commercial Department of the Bell company will gladly, upon call, make a study of your business and suggest a regular plan for long distance calls. In the meantime, what far-distant man or concern would you like to talk to? The telephone on your desk will connect you, just as it does with anyone wanted in the next town or the next building. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

losses during 1924 than to those of 1925.

One of the worst features of these and other discouraging announcements is that they were scattered throughout the year, and were so nicely timed as to scare investors out of the market every time that they began to display renewed interest in textile stocks. When it became certain early in the fall that relatively cheap cotton was assured and the demand for yarns and cloths began to increase it looked as though nothing could prevent a substantial revival of interest in textile stocks; before active buying could get under way, however, it was cut off by the publication of discouraging mill statements and by reports of heavy inventory shrinkages due to the decline in cotton prices.

NEW BEDFORD DIVIDENDS

1925

(From Sanford & Kelley)

Corporation	Capital	Rate	Amount
Acushnet	$2,000,000	6	$120,000
Beacon com	1,200,000	6	72,000
Beacon pfd	1,800,000	6	*102,400
Booth com	852,800	8	68,224
Booth pfd	344,100	6	20,646
Bristol	1,000,000	12	120,000
Butler	2,300,000	8	184,000
City Mfg	750,000	6½	48,750
Dartmouth com.	4,000,000	8	320,000
Dartmouth pfd.	600,000	5	30,000
Fairhaven com.	1,500,000	0	.....
Fairhaven pfd.	2,000,000	0	.....
Gosnold com	1,650,000	0	.....
Gosnold pfd	1,650,000	6	99,000
Grinnell	1,500,000	6	90,000
Hathaway	2,000,000	6	120,000
Holmes com	600,000	6	36,000
Holmes pfd	600,000	6	36,000
Kilburn	2,250,000	8	180,000
Manomet	8,000,000	0	.....
Nashawena	†7,500,000	8	†480,000
Neild	1,200,000	12	144,000
N. B. Cot. com.	1,050,000	...	.....
N. B. Cot. pfd.	750,000	6	45,000
Nonquitt	4,800,000	0	.....
Pemaquid com.	300,000	0	.....
Pemaquid pfd.	750,000	...	.....
Pierce Bros.	700,000	...	.....
Pierce Mfg	600,000	32	192,000
Potomska	1,800,000	6	108,000
Quissett com	2,000,000	8	160,000
Quissett pfd	305,000	6	18,300
Sharp com	2,656,000	0	.....
Sharp pfd	1,161,000	0	.....
Soule	1,260,000	38	478,800
Taber	1,600,000	6	96,000
Wamsutta	6,000,000	6	360,000
Whitman	3,000,000	6½	195,000
	$74,028,900		$3,924,120

*Due to new issue not being entirely subscribed.

†Capital increased by issue of $1,500,000 new stock as of July 21, 1925. Dividends paid on old capital of $6,000,000.

The dividends paid by New Bedford cotton manufacturing corporations in 1925 on $74,028,000 capital amounted to	$3,924,120	5-30/100%
There was paid in 1924 on $73,251,900 capital	3,765,720	5-13/100%
An increase	$158,400	17/100%

The passing of dividends by Lancaster and Androscoggin and continuance of reduced payments by other mills tended to eliminate optimism and the very general selling of textiles for tax loss-taking in December tended to further discourage the market.

Not So Dark as It Looks

It has already been shown that the year closed with average prices of textile shares well above the lows touched during the summer months. This advance was based upon the knowledge that there were comparatively few cotton mills that were not able at least to break even during 1925, and that if it had not been for the losses of 1924 most of them would have made a better showing. It is also a fact that most of the inventory losses due to the decline in cotton early in the fall were made good by the later advance in raw cotton and cloth prices. The experience of woolen and worsted mills has not been much different than that of cotton mills; a large proportion of the inventory losses suffered by the former during the first half of the year were offset by the advance during the last half of the year. Wool manufacturers are now in a position to take advantage of what appear to be stabilized raw-material prices, and cotton manufacturers have an even greater advantage in relatively cheap raw material prices. The reverses and difficulties of the last two years have stimulated all well-managed textile mills to cut inventories and overhead to the bone, and to increase manufacturing and merchandising efficiency, and all that is needed to enable such mills to net reasonable profits in 1926 is a good volume of business at fair prices.

With few exceptions textile share prices are today based upon the poor showings made during the last two years and have not really commenced to discount an improvement in business and earnings. The securities of large numbers of New England cotton mills are selling today on the basis of less than $10 a spindle, and in some cases at less than their net quick assets. For those investors who believe that there is a future for the textile industry in New England there is no lack of bargains to be found. There are few such bargains to be found in the stocks of well managed and well equipped southern mills. There are practically no bargains of this character to be found in silk and rayon securities.

New Bedford Expectations Brighter

Expect More Prosperous Year Than 1925—Dividends Last Year Increased Over 1924

From Our New Bedford, Mass., Correspondent

WITH most of the cotton mills of New Bedford enjoying a better year during 1925 than prevailed in 1924, and some of them better situated financially than was the case 12 months ago, the beginning of 1926 starts out with indications of more prosperous times in store for both employe and employer. With few exceptions, the mill corporations were able to disburse dividends to stockholders, and while the yield fell considerably below the average for the last 10 years, the aggregate showed an increase over 1924 both in the amount distributed and in the average dividend.

Shares at Bargain Rates

Though mill shares generally are down considerably compared with the average of a year ago, having lost approximately 19 points in that time, if improved conditions had governed the situation instead of the feeling of pessimism that has prevailed, the difference would have been an increase rather than a decrease. It is a well known fact that at the present time mill shares are being offered considerably below their true value, especially in view of the favorable balance sheets and the strong financial situation of the majority of the mills. Should conditions in the textile industry improve to any considerable extent within the next few months, those who have purchased mill shares during the last three months will be in a position to reap a handsome profit on their investment.

More machinery was operated in the mills towards the end of the year than at any time in the past two years, while the operatives in addition worked longer hours, tending toward a greater volume of business for the manufacturing corporations. The retail stores of the city also had a much better year than in 1924, while savings deposits, usually a true reflex of conditions in a manufacturing city, showed an increase in the amount deposited over that of the previous year.

Dividends Mostly Earned

The cloth mills generally operated under conditions that afforded a better margin of profit than had been the case in 1924, and if the annual financial statements that have been issued to date are to be taken as showing the conditions in the cotton mills, then most of the dividends paid out during 1925 were earned during the fiscal year. The yarn mills were hard hit, though in one or two instances, where up to date methods and efficient management obtained, the showing for the 12 months was much better than in more recent years.

With raw material obtainable at a lower price, and a decided falling off in importations of cloth from abroad, the fine goods mills had a larger field for their product. Reduced taxes, both Federal and city, have had a tendency to improve the situation for the mills, and the feeling at the present time is much more optimistic than that of a year ago. While there is no feeling of exultation among the mill executives as to the outlook for the coming year, the prospects are considered much brighter among the corporations where foresight as to the future needs has been displayed. Despite the extremely low prices at which mill stocks are being offered, the majority of the cotton manufacturing corporations appear to be operating their machinery at a bigger rate of production than at any time in the last two years.

One Mill Pays Extra

One of the outstanding features of the year was the paying of an extra cash dividend by the Soule Mill, when stockholders of this corporation received $30 additional over the regular $2 declared in the third quarter. This was the first extra paid by the corporation since 1922, when the distribution of $38 in all was the same as last year. In 1923 and 1924, the disbursement was restricted to $8 each year. The extra distribution last August was from accumulated profits, and as showing the faith that investors have in this mill, shares that were sold soon after the declaration of the extra realized practically the same figure as stock that changed hands just before the additional dividend. The last available balance sheet of the corporation showed a surplus of net quick assets of more than one million dollars on a capital of $1,260,000.

HIGH AND LOW ON NEW BEDFORD STOCKS

(From Sanford & Kelley)

	—1925—		—1924—	
	High	Low	High	Low
Acushnet	100	72½	116	94
Beacon pfd	100	94	100	95
Booth com	No Sales		168	149
Booth pfd	106	105	115	110
Bristol	192½	147	195	140
Butler	137½	110	137	116
City Mfg	140	95	140	116
Dartm'th com.	160	138¾	150	125
Dartm'th pfd.	86½	85	90	84⅜
Fairhaven com.	30	1	72½	50
Fairhaven pfd.	54	12½	75	50
Gosnold com.	95	54⅞	125	93⅛
Gosnold pfd.	86	60	93	80
Grinnell	123	99	135¾	115
Hathaway	119	105	145	135
Holmes com.	145	90	No Sales	
Holmes pfd.	102½	90	112½	102½
Kilburn	157	110	160	135
Manomet	51½	27½	59	27
Nashawena	132	104½	129	98
Neild	240	210	217	210
N. B. Cott.com.	No Sales		No Sales	
N. B. Cott. pfd.	100½	98¼	101	98x
Nonquitt	80	47½	77½	50
Pierce Bros.	No Sales		No Sales	
Pierce Mfg.	455	425	475	440
Potomska	110	80	111	90
Quissett com.	185	132½	194	170
Quissett pfd.	97x	96x	No Sales	
Sharp com.	53½	34	67½	34¼
Sharp pfd.	77	55	80	54
Soule	197½	170	192½	165
Taber	112½	100	113	92⅝
Wamsutta	100	79x	100	87
Whitman	139x	90	152½	132

With the aid of the extra dividend, Soule was enabled to lead all the New Bedford cotton mills in its generous distribution, the $38 being $6 higher than the $32 paid to Pierce shareholders, who received the same amount as in 1924. Pierce is still capitalized at $600,000, being one of few New Bedford corporations that did not issue a stock dividend in 1922. The annual yield of this corporation has not been below $32 in the last nine years, the average dividend in that time being better than $39.

Strong in Quick Assets

As Neild and Bristol also paid out $12 to stockholders during the year, there would appear to be grounds for faith in the future of the textile industry so far as New Bedford is concerned. Pierce, with its capital of $600,000, has a surplus of quick assets amounting to $2,236,049.

Bristol, capitalized at $1,000,000, has a net quick surplus of $810,794, while Neild, capitalized at $1,200,000, has $1,039,625. Neild is another corporation where the management

RAYON SECURITIES

Much valuable information has been accumulated by us in connection with our activity in Rayon securities during 1925, which we have incorporated in a general circular.

We have also prepared individual descriptions of the following companies:

COURTAULDS, LTD. (VISCOSE COMPANY OF AMERICA)
SNIA VISCOSA (ITALIAN VISCOSE)
TUBIZE ARTIFICIAL SILK COMPANY OF AMERICA
AMERICAN CELLULOSE & CHEMICAL MANUFACTURING CO., LTD.
AMERICAN BEMBERG CORPORATION
INDUSTRIAL RAYON CORPORATION
AMERICAN RAYON PRODUCTS CORPORATION

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United States Rayon Corporation

The United States Rayon Corporation is one of the largest Corporations engaged exclusively in the conversion of raw rayon, by processing and dyeing.

Cumulative convertible Preferred Stock of this Corporation is on an annual dividend basis of $7 per share.

The rapid and consistent growth of the rayon industry is reflected in the largely increased business of the United States Rayon Corporation. Although additional plant facilities are being opened as rapidly as possible, the volume of business offered is largely in excess of its present capacity.

Based upon its past record and its immediate prospects, we recommend the purchase of shares of the United States Rayon Corporation as a sound investment having large potentialities for enhancement in value.

Further information will be furnished on request.

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Fall River Hopeful for Future

Optimistic, Despite Fact That Dividends Did Not Average 6%—Passing of Dividends Improved Surplus

From Our Fall River, Mass., Correspondent

DESPITE the long period of depression in the textile industry, Fall River, with its more than 50 textile corporations, is optimistic as to the future of the industry. The dividend payments for the year did not average 6% on invested capital, but the passing of dividends during the past year finds the mills in a better condition to start another year than otherwise would be the case as 30 corporations have a surplus of quick assets that could not be shown had dividends been paid.

The better feeling is mainly due to cheaper cotton though considerable significance is given to the fact that cloth buyers who deserted the Fall River market for southern markets two years ago have re-appeared in the northern markets. Inquiry in the Fall River market has been broader during the past few weeks than for over two years back. Investors too are feeling more optimistic as shown from the fact that there has been increased buying of mill stocks and in many instances at an advance of as high as 10 points per share over the low quotations of the year.

Criticism has been made of the management of the local mills as a whole which is believed unwarranted when note is made of the way in which assets have been conserved on the part of the majority of the corporations through a long depressive period. Some of the mills even made large earnings and that they did not pay out all their earnings in dividends does not mean a loss to the stockholders in the long run.

The Pocasset stock touched the new low mark of $30 per share during the year, due probably to the fact that no dividends had been paid for nearly two years and that a loss of close upon $100,000 was shown for 1924. The annual statement for 1925 had not been issued at the time this review was prepared.

Under the new management of James N. Sinclair, the Granite Mills has returned to a profit earning basis though no dividends have been paid during the past two years. The corporation still has a surplus of close upon $200,000 and the stock is now quoted at 76 as against 65 early in 1925.

The Chace Mills have resumed operations after having been idle for two years. The shut-down resulted in a loss of about $60,000 for the past year but conditions have been such that an even greater loss might have resulted had the mill been in operation. The stock dropped to $30 a share during the year notwithstanding the annual statement showed a surplus of $125,000. The stock has recovered 10 points since the issuance of the annual statement, and the resuming of operations.

The arrival of cheaper cotton together with a demand for goods at about the time the Arkwright Mills found itself in a position where there was immediate need of reorganization proved a life saver for that corporation. Financially embarrassed and with no market for the stock it looked for a time as though the Arkwright would be forced to go by the board even before the Seaconnet. Now the mill is running to well nigh capacity and the product sold up for several months at a profit so it looks as though the storm is weathered for the present.

The Seaconnet is in no better circumstances than one year ago when it was turned over to the creditors. Such cloth as was upon the looms has been run off and sold together with the bulk of the cloth then on hand so that a small profit was shown for the year but the claims which total over $800,000 have been running for a long time and in view of the creditors clamoring for a settlement it looks as though a sale of the assets must follow in the near future and it is doubtful if a forced sale will result in the stockholders getting anything.

The King Philip Mills made by far the best showing of the local mills for the year, paying 26% in dividends to its stockholders from earnings. The corporation has been one of the best paying for a number of years. It paid 31% in 1923, 31% in 1922 and 23% and $50 in Liberty bonds in 1920. The corporation has a surplus nearly equalling its capital of $2,250,000 and the stock has not touched lower than 135 in years.

The Luther Mfg. Co. made a good showing for the year, paying its stockholders 8% from earnings besides increasing its assets from $274,000 to $317,000 and expending $60,000 for new machinery. Little variance in the price of the stock was shown during the year. The asking price is now 130 with but small offerings at that price.

Sagamore Mfg. Co.'s stock touched the new low mark of 165 during the year and due mainly to the reduction of the dividend rate of 20% for the previous year to 11%. The stock sold as high as 300 two years ago. The corporation is still rich in assets, having shown a surplus of close upon $2,000,000 in its annual statement for 1925.

The Border City Mfg. Co. passed its dividend for the year in order to conserve assets and pay for improvements against the return of better business. The corporation showed a surplus of nearly $600,000 in its last annual statement. The stock is now selling around 60 per share.

The Davis continued its dividend rate of 6% without dipping into its surplus account though the stock has dropped below par for the first time in several years.

Bourne Mill issues are still considered one of the best buys of the local issues though the dividend was reduced to 7% as against 11% for the previous year. The asking price for the stock is now down to 102 and it was considered a good buy one year ago at 150. The corporation has a surplus of over half a million.

That the Lincoln Mfg Co., which is a fine goods mill, has not made a better showing is somewhat surprising. Only 1½% was paid in dividends and the small surplus shown the previous year has been wiped out. A long drawn out strike of the weavers seriously affected the corporation.

The Cornell, which is one of the smallest as well as oldest of the local mills, continues to hold its own with the plain goods mills. It reduced its dividend rate from 8% to 5% rather than to dip into its surplus.

The Stafford Mills stood idle throughout the year and thereby conserved their assets and are now about ready to resume operations under their new management. A big slump in the price of stock occurred during the year, it now being quoted at 50. The mill has a surplus of over $300,000 and there is no reason why the stock should not show an advance.

No dividends have been paid by the Davol since it took over the Tecumseh and the stock dropped to the new low of $40 per share. As a plain goods mill, it has felt the depression severely but is in a position to take immediate advantage of any improvement in the market.

The Flint Mills paid 5% in dividends as against 8% for the previous year but reduced its capital

FALL RIVER DIVIDENDS, 1925

(From G. F. Haffards & Co.

Names of Corps.	Capital	Rate	Amount
Amer. Linen..	$800,000	0	.....
Ancona pfd...	100,000	1½	$15,000
Ancona com...	200,000	....	.....
Arkwright....	1,000,000	0	.....
Barnard.....	1,250,000	2	25,000
Bourne.....	1,000,000	7	70,000
Border City...	1,800,000	0	.....
Chace.....	1,200,000	0	.....
Charlton.....	1,200,000	8	96,000
Conanicut....	*300,000	0	.....
Cornell.....	600,000	5	30,000
Davis.....	2,500,000	6	150,000
Davol.....	1,500,000	0	.....
Flint.....	1,160,000	5	87,000
Granite.....	1,250,000	0	.....
King Philip...	2,250,000	26	585,000
Laurel L. pfd..	300,000	0	.....
Laurel L. com.	600,000	0	.....
Lincoln.....	2,250,000	1½	33,750
Luther.....	525,000	8	42,000
Merchants....	1,500,000	4	60,000
Mechanics....	750,000	0	.....
Narragansett..	600,000	0	.....
Osborn.....	750,000	0	.....
Parker pfd....	1,250,000	0	.....
Parker com...	1,500,000	0	.....
Pilgrim.....	1,200,000	10	120,000
Pocasset.....	1,200,000	0	.....
Richard Borden	1,000,000	4½	45,000
Sagamore.....	3,000,000	11	330,000
Seaconnet.....	1,200,000	0	.....
Shawmut pfd..	250,000	7	17,500
Shawmut com.	350,000	6	21,000
Shove.....	1,200,000	0	.....
Stafford.....	1,000,000	0	.....
Stevens.....	1,200,000	6	72,000
Tecumseh.....	750,000	41	307,500
Troy C. & W..	300,000	0	.....
Union Cotton.	†1,200,000	6	99,000
Wampanoag..	1,000,000	0	.....
Weetamoe....	500,000	0	.....
	$43,585,000		$2,192,250

*Amount authorized. Outstanding $251,700.
†Capital reduced to $1,200,000 by payment of 33⅓% in cash. Dividend of 1⅔% paid on new capital. ‗An average of 5,029 on the above capital.

HIGH AND LOW ON FALL RIVER STOCKS

(From Sanford & Kelley)

	—1925— High	—1925— Low	—1924— High	—1924— Low
Am. Linen....	45 *	27	62½	39½
Ancona pfd....	No Sales		No Sales	
Ancona com...	No Sales		No Sales	
Arkwright....	16	7	No Sales	
Barnard.....	75	55	90	80
Border C. M..	99	56	105	83
Bourne.....	105	97½	150	125
Chace.....	55	30	65	42½
Charlton.....	135	125	138	122
Conanicut....	No Sales		No Sales	
Cornell.....	101	95	120	115
Davis.....	100	85	104	95
Davol.....	65	40	107	64
Flint.....	125	90	150	113
Granite.....	75	58	94	65
King Philip...	160	130	172½	135
Laurel Lake,com	8½	7	30	15
Laurel Lake,pfd	No Sales		No Sales	
Lincoln.....	107	73	105	88
Luther.....	125	125	130	110
Mechanics....	65	41½	82½	55
Merchants....	105	79	128	110
Narragansett..	85	85	120	95
Osborn.....	75	55	75	65
Parker com...	8	1	35	30
Parker pfd....	11	11	64	57
Pilgrim.....	175	169	175	125*
Pocasset.....	50	30	52	45
R. Borden....	105	60	118	99
Sagamore.....	242½	170	300	250
Seaconnet.....	No Sales		5	3
Shove.....	55	27½	75	50
Stafford.....	50	50	95	80
Stevens.....	128⅛	112	114¼	100
Troy C. W. M.	125	120	No Sales	
Union Cotton..	132	95	145	112½
Wampanoag...	60	50	85	80
Weetamoe....	32	28¼	80	70

* New stock.

has been able to maintain a generous attitude towards its shareholders even in the face of the depression that affected so many other corporations. In 1922, Neild paid $40 in cash and declared a stock dividend of 50%. The following year, $14 was paid in cash, the equivalent of $21 on the old stock, while in 1924 and 1925, the yield was $12 each year, or equal to $18 on stock previous to the stock dividend.

In the face of the conditions that New Bedford mills have had to contend with in the last three years, the financial reserves at the present time would indicate that most of the mills are in a position to take care of themselves for some years to come. On a total capitalization of $70,873,600, the surplus of quick assets are returned at $38,116,042, or better than 53% of the outstanding capital.

Changes Affect Mill Shares

Changes in the management and executive heads at the Potomska and Acushnet affected the shares to some extent, but towards the end of the year these rallied considerably. Loss of approximately $125,000 by the failure of a cotton brokerage firm necessitated Acushnet passing its dividend in one quarter. This was made up in the final distribution for the year, though in the meantime, the stock had touched a new low mark of 72½. Later, the shares rallied to par of 100.

With the resignation of Treasurer Percy L. Kent and other executive heads at the Potomska, the stock went down as low as 80, the lowest for more than 20 years, but later sold as high as 106. The corporation started the year of 1926 on an excellent basis from a financial standpoint.

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from $2,500,000 to $1,160,000 by payment of 33⅓% in cash. The mill is still rich in assets and that the stock has dropped to par has occasioned considerable surprise.

The Union Cotton Mfg. Co. reduced its capital stock from $1,800,000 to $1,200,000 by payment of 33⅓% in cash, and also paid 6% in dividends. This corporation also still has large assets and is in a position to continue its present dividend rate if not to increase it under its reduced capitalization.

Little has been doing during the year in Richard Borden Mfg. Co.'s stock though 4½% was paid in dividends and a surplus of nearly $400,000 was shown by the annual statement.

The Merchants Mfg. Co. reduced its dividend rate from 6½ to 4% and also dipped into its surplus at that but still has a comfortably large showing in assets. The stock has sold at 80 as against 125 one year ago.

The Pilgrim Mills made the next best dividend showing to the King Philip paying 8% regular and 2% extra. The plant has been operating to capacity throughout the year and is well sold up on contracts for some time to come. The stock is selling on a par with Sagamore at this time but only small offerings appear in the market.

The Parker Mills have been in operation for most of the year and it is doubtful if any treasurer could have made a better showing than L. S. Chace with a plant handicapped by the big debt which he was obliged to saddle on taking charge. There has been no demand for the stock.

Laurel Lake is another of the mills that was forced to reorganize a few years ago and it will be some time before it again returns to a dividend paying basis though Treasurer Bowen more than broke even during his handling of the mill during the year.

The Shove, Narragansett, Weetamoe, Wampanoag and Troy all passed their dividends for the year and were in operation only a part of the time but with the exception of the Troy they are in no serious condition and should be able to make the most of any improvement in the business.

The Osborn under the management of James Sinclair has improved its condition but still has a net debt of over $200,000 and it will be some time before it reaches a dividend paying basis. Sales of the stock have been quoted at 65 per share.

The Shawmut Mfg. Co. maintained its rate of the previous year, 7% on preferred stock and 6% on common.

The Stevens Mfg. Co. was one of the few corporations to increase its dividend rate for the year, paying 6% as against 5½% for the previous year, and paying the same from earnings. The stock is now selling at 126 per share.

The Charlton had a good year and paid its stockholders 8%.

Firm Outlook for Southern Shares

1926 Showed Average Better Than 1925—Prices Should Advance Slightly

Prepared for TEXTILE WORLD, by A. M. Law & Co., Spartanburg, S. C.

THE market for southern textile shares was without any very definite tendency during the entire year 1925. There were minor fluctuations in values but none of any great consequence, such as the rapid and prolonged advance of stocks in 1923 and the continued weakness of the market in 1924. The year opened with hopes expressed that liquidation had about reached its conclusion and this turned out to be the case, and while on the other hand there were not a great many offerings of stocks during the year, which would have depressed the market, yet there were few buying orders of any consequence.

The past year saw a distinct split in the market. The second grade stocks, that is those where dividends are subject to variation and surplus accounts have not been built up sufficient to sustain them during periods of depression, continued rather inactive and weak throughout the year. These stocks are purchased largely by speculators and at no time during 1925 was the speculative element buying of any consequence. Most speculators had either turned their attention to the more attractive industrials, such as motors, listed on the New York Stock Exchange, or were busy buying Florida land. For that reason a good many of these speculative issues found little support and declined in some cases to the lowest prices experienced since 1921.

Throughout the year there was very good investment buying of the stronger companies. It was usually difficult to bring buyers and sellers together, but there was no lack of orders in the market for the stronger stocks, and these gradually advanced throughout the year. This investment buying has been the back-bone of the market for southern textile stocks since 1920, for although speculators were quite active in 1923, investment buying even that year was taking up a great many of the offerings. This investment buying, however, has gradually narrowed the market on many of these stocks, for when once purchased for investment they are seldom re-offered. It would be better for the market if there were a greater floating supply of these shares.

Reviewing the year more in detail, the winter months showed no definite tendency. In the spring the market was a little more active with gradually advancing prices. The market began to slow down, however, as summer came on and with the exception of July, which saw rather active trading, prices remained stationary during this period.

Effect of Drouth

The forced curtailment of a great many mills of the South brought about by the prolonged drouth of the summer, produced the desired results which, unfortunately, have never been arrived at by mutual co-operation of southern mills, and the healthy goods market which resulted from this curtailment also stimulated the market for stocks and prices began to advance throughout the fall, and the better class stocks are now at higher prices than at any time since 1923.

The only large southern cotton mill property sold during the year was Brogon Mills of Anderson, S. C., which was purchased by the Appleton Company for their southern plant. The inventories and other assets of Brogon Mills are being liquidated, and it is believed that stockholders will receive about $155 per share. This is generally considered quite a satisfactory price, as the stock had formerly been selling in the open market between 110 and 115.

Preferred Stocks

What we have said applies primarily to common stocks. The high grade preferred stocks have been in consistent demand throughout the year, with prices higher than prevailing at any time in their history. A new issue of Beaumont preferred which was offered the first of July was sold in a few hours and represents the only new financing of any consequence during the year. Holders of sound issues are very loathe to part with their stock and buyers are forced to pay good premiums to purchase such stocks as Pacolet preferred, Judson preferred, and others. Bibb Mfg. Co. paid a large stock dividend in the form of a 6% second preferred, the market on which quickly advanced to par. This represented the largest dividend disbursement of any southern mill during the year, and gave the stockholders who wished to keep their holdings a desirable investment and at the same time permitted those who desired to obtain cash from their dividend an active stock, which is readily marketable.

Optimistic for Future

There is a feeling of decided optimism in looking toward 1926. While it is not anticipated that any remarkable earnings will be made during this period, yet it is generally felt that business will continue good and for the year should average considerably better than 1925. Cotton is selling at a price which will permit a margin of profit and there is now a tendency toward cooperation among mill executives and they are watching much more carefully the goods market than in former years. The stocks of the stronger companies, such as Pacolet, Clifton, Judson, Monarch, and Bibb will probably continue to be in strong demand with gradually advancing prices. If there is any very great change in earnings of southern mills, speculators will again come into the market and the lower priced issues of stocks, which always first attract them, will advance rapidly. Some of these stocks are now selling at quite attractive prices and should prove a good purchase if held over a period of a year or more.

The stiffening money rates of the East will not materially affect the money market in this section of the South, as there has been no expansion of credit here to finance the purchase of stocks. We doubt also whether the pronounced and continued decline of other industrials listed on the New York Stock Exchange would materially affect the market for southern textile stocks, as these did not participate in the rapid advance of other industrials. In fact, if speculators of this section are drawn from these other stocks, they may come even more actively into the market for southern textiles.

To sum the situation up, we expect the average prices to advance slightly higher, with fewer and fewer offerings of investment stocks, and speculative issues may at any time spring into activity and sell at higher prices.

Southern Mill Stocks, 1925

Mill	Dividend	Quotations High	Low
Abbeville Cotton Mills	6%	115	100
American Spinning Co	15%	276	240
Anderson Cotton Mills	....	98	83
Arcadia Mills	10%	250	235
Avondale Mills, Ala	60%	950	835
Beaumont Mfg. Company	10%	410	300
Belton Mills	4%	80	55
Belton Mills, Pfd	7%	100	94
Bibb Mfg. Co	8%	240	190
Brandon Mills, Pfd	7%	101	96
Calhoun Mills	6%	121	114
Chesnee Mills	10%	150	125
Chiquola Mfg. Co	30%	300	285
Chiquola Mfg. Co., Pfd	6%	100	92
Clifton Mfg. Co	8%	148	130
Columbus Mfg. Co., Ga	8%	142	133
Cowpens Mills	2%	70	59
D. E. Converse Co	7%	122	109
Dallas Mfg. Co., Ala	6%	155	130
Darlington Mfg. Co	7%	90	80
Duncan Mills	....	95	84
Duncan Mills, Pfd	7%	100	92
Eagle and Phenix Mills, Ga	4%	170	140
Easley Cotton Mills, Pfd	7%	96	88
Enterprise Mfg. Co., Ga	6%	110	90
Gaffney Mfg. Co	3%	91	82
Gainesville Cotton Mills, Ga	8%	185	155
Glenwood Mills	8%	135	120
Gluck Mills	8%	128	85
Hamrick Mills	10%	140	122
Inman Mills	7%	165	155
Inman Mills, Pfd	7%	103	102
Judson Mills	8%	204	188
Judson Mills, Pfd	7%	108	103
Laurens Cotton Mills	8%	150	150
Limestone Cotton Mills	10%	140	130
Mollohon Mfg. Co	8%	110	99
Monarch Mills	7%	138	125
Monarch Mills, Pfd	7%	105	100
Musgrove Cotton Mills	....	80	68
Newberry Cotton Mills	8%	133	120
Norris Cotton Mills	....	88	84
Orr Cotton Mills	4%	108	100
Orr Cotton Mills, Pfd	7%	100	96
Pacolet Mfg. Co	10%	215	201
Pacolet Mfg. Co., Pfd	7%	106	102
Piedmont Mfg. Co	8%	148	133
Poe, F. W., Mfg. Co	6%	126	108
Poinsett Mills	3%	98	75
Riverside Mills (Par $12.50)	6%	10¼	9¼
Riverside & Dan River	10%	220	185
Saxon Mills	6%	101	83
Sibley Mfg. Co., Ga	....	80	60
Sparton Mills	8%	165	149
Toxaway Mills (Par $25)	8%	34	31
Union-Buffalo Mills	....	65	55
Union-Buffalo Mills, 1st Pfd	7%	95½	91
Union-Buffalo Mills, 2d Pfd	5%	52	49
Victor-Monaghan Co	8%	108	103
Victor-Monaghan Co., Pfd	7%	113	107
Ware Shoals Mfg. Co	10%	175	140
Woodruff Cotton Mills	6%	150	130
Woodside Cotton Mills Co	7%	121	107
Woodside Cotton Mills Co., Pfd	7%	94	87

Basic Facts of the Cotton Trade

We issue a Cotton Information Service dealing with fundamental conditions in the world's cotton trade. It consists of weekly reports containing current information received by telegraph from our service correspondents in the principal cotton, yarn and cloth markets of this country and abroad, and an annual volume giving statistics on important phases of the trade.

Many merchants and manufacturers find that the service aids them in forming opinions on the future course of the cotton market. We furnish it to our customers in the trade and for a fee to non-customers. Further information regarding it will be given on request.

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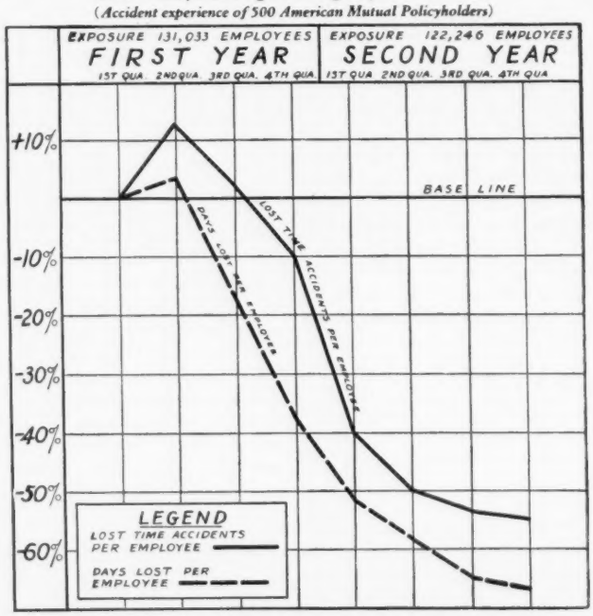

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